ABSTRACT
The analysis presented in this paper results from fieldwork conducted in the Autumn of 2018 from the speakers of the lesser-known language, Spiti, native to the Sagnam village of the Lahaul and Spiti district of Himachal Pradesh. Of the many varieties spoken there, the present variety is spoken mainly in the Pin Valley. This paper aims to present a brief sketch of the verb morphology of Spiti. In doing so, it attempts to exhibit the various morphological strategies that the speakers use to convey various temporal, aspectual, evidential, and modal information in the language. The two key highlights of the analysis of Spiti are the vibrant system of evidential found in the language and the presentation of Spiti as a grammatically ‘tenseless’ language. Since this research finds Spiti to be a language that does not possess the grammatical category of tense, this paper also brings to light the alternate ways in which temporal information is conveyed.

Keywords: Evidentiality, Morphology, Spiti, TAME, Tenseless

1.0 Introduction
In this paper, I attempt to present the analysis of the verb morphology of Spiti. Spiti (also called Piti, Spiti Bhoti) is a language widely spoken in the hamlets of the Spiti sub-district of Lahaul and Spiti. One can often find many lexical variations across the various hamlets in the region. Nevertheless, the constant contact and involvement with the neighboring hamlets have enabled them to communicate effectively with each other. For the sake of consistency during fieldwork, data was collected from the Pin speakers of Spiti, which shall be presented in this paper.

The following discussion is divided into four primary sections. In the first section, an introduction is provided to the language. This includes a sub-section on the literature review of the work done so far on Spiti that is relevant to this study. This sub-section is followed by a discussion on the methodology adopted for this study and finally, a brief introduction to the language is provided. The second section is focused on the discussion of the agreement morphology with respect to the verbal system in Spiti. All interesting observations made in the section are supported with relevant data and reasoning.

This section is followed by the core discussion of the paper, i.e., the morphology of TAME. Aspect morphology, mood morphology, evidential morphology, and finally temporal morphology are discussed in detail in this section. The last section presents the conclusion of the study. In order to present a clear and precise
picture of the verb morphology with respect to TAME, two verbs are chosen and their paradigms are presented. The paper ends with the presentation of key references and abbreviations used to support the work.

1.1 Literature Review

Spiti means “the middle land” and it was suggested by the language consultant Mr. Thinle Gyatsong that it is called so since it is an expasne of land located between Tibet and India. Locals divide the district of Spiti into four parts namely Sham (the lower regions), Pin, Bhar (middle regions) and Tod (higher regions) (Sharma, 1992, 4). As the terrain in Pin, Tod, and Sham is more hospitable, the majority of the population of Spiti resides here. About fifty to sixty hamlets in Spiti speak the language, also called Spiti and there are considerable differences in Spiti spoken in these regions. They make use of the Roman and Tibetan script to write the language in the present day. The language’s ISO 639-3 code is ‘spt’ and Ethnologue (Eberhard, Simons & Fening, 2020) classifies it as a “stable” and “vigorously spoken” language belonging to the Central Bodish group of the Tibeto-Burman language family (cf. Sec 1.3 for further information).

Grierson in his work (Grierson, 1909, 88) evaluates that the whole district of Lahaul and Spiti employs the use of Spiti which is very “classical Tibetan” and quite similar to Ladakhi. Since the number of speakers is scanty, very little is known about the language at the time. He also explains that Jaschke’s Tibetan dictionary that mentions a few words of Spiti was one of the first works to focus primarily on Spiti but much of it was only as part of sermons and discourse. In a similar line of research but a more recent attempt, Dorje (2017) also presents an extended list of basic vocabulary items that attempts to cover the lexicon from a wide span of semantic fields. In this work too, the importance of the features of Number and Person in the agreement morphology of Spiti.

Coming specifically to the research regarding the verbal system, it was suggested that “…no verb of any category is inflected for number category, both numbers are represented by a single form…from the point of person too, it is inflected for two persons only, viz. first and non-first, the 2nd and 3rd persons having identical forms for both of them (Sharma, 1992, 57). As far as the verbal categories of tense and aspect were concerned, he proposed that a very clear distinction was available between past and non-past and perfect and non-perfect. Even though he suggests that there seemed to be a distant suffix to mark future time, in actual speech, there was no morphological distinction between made between present and future tense. He proposed a first-person versus non-first-person agreement system as he believed that the markers varied only for these categorical variations.

In his work, Grierson had identified three verbal substantives yin, yod and dug in the language whose presence was crucial in the workings of the Spiti morphology. The first-person present tense was formed by adding yod to a participle ending in a, before which a final consonant is doubled. For example, in Spiti chha-a yod translated to “I go” while gyab-ba yod to “I strike”. There were some instances where the same form is used for the third-person as well, as seen in dad-da yod “he lives”. The second and third-person forms of the verb were formed by adding dug after a verb root ending in a consonant and rug for the verb form ending in a vowel, as in tṣho-rug “he is grazing”. For the past tense, he found the existence of verb forms like gyab-song “thou struckest” and gyub-ban “I struck”. The future tense, he proposed, was formed by adding in onto the verb base, as in gyab-in “will strike”. Lastly, some imperative forms of the language were realized to be of the forms like chhin-h-tong meaning “bind!” and len-tong meaning “take!”.

It was only in 2001, that for the first time a clear indicator of evidentials in the language was proposed. It was suggested that “…speaker’s knowledge of the verbal action is the guiding principle in Tabo-Tibetan” and that the verb morphology needs to be “examined in the light of the speaker’s involvement, perception, inferred knowledge and unspecified knowledge, i.e., based on the range from intimate knowledge to incomplete
knowledge” (Hein, 2001, 35). The following table presents the auxiliary morphemes based on the speaker’s perception:

<table>
<thead>
<tr>
<th>Focus on speaker’s involvement</th>
<th>Focus on the speaker’s perception</th>
<th>Focus on the speaker’s unspecified knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-visual perception</td>
<td>Visual perception</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>-et</td>
<td>-(t)uk</td>
</tr>
<tr>
<td>Future</td>
<td>-in</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>-peret</td>
<td>-derak</td>
</tr>
<tr>
<td>Perfect</td>
<td>-deret</td>
<td>-peruk</td>
</tr>
<tr>
<td>Past</td>
<td>-(w)en</td>
<td>-(w)ak</td>
</tr>
</tbody>
</table>

Keeping in mind the nature of the verbs, i.e., controllable and non-controllable based on their semantic nature, she proposes a three-term system for the language according to Aikhenvald (2013) and identifies four sets of evidential markers for various tense/aspect combinations. The following table represents the markers for these bundles of features.

<table>
<thead>
<tr>
<th>Categories of evidentiality</th>
<th>Focus on speaker’s involvement</th>
<th>Focus on the speaker’s unspecified knowledge</th>
<th>Focus on the speaker’s perception</th>
<th>Focus on the speaker’s inferred knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tense/Aspect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present/Imperfective</td>
<td>-et</td>
<td>-kak/-ak</td>
<td>a) tuk/-uk</td>
<td>b) -arak</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-ken jinkak</td>
<td>-ken jink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-ken jindarakan</td>
<td></td>
</tr>
<tr>
<td>Future/Imperfective</td>
<td>-in</td>
<td>-kajin &gt; -ken</td>
<td>-kak/-ak</td>
<td>-tçe jinkak</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-na jink</td>
</tr>
<tr>
<td>Present/Perfective</td>
<td>-deret</td>
<td>-derak</td>
<td>a) -peruk</td>
<td>b) -derak</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-derak</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-peret</td>
<td>-pekak</td>
<td>-perak</td>
<td></td>
</tr>
<tr>
<td>Past/Imperfective</td>
<td>-wajin&gt;</td>
<td>-wa ak &gt;</td>
<td>a) -soŋ</td>
<td>b) (?)-tçuç</td>
</tr>
<tr>
<td></td>
<td>-wen</td>
<td>-wak</td>
<td>-wa jinkak &gt;</td>
<td>-anak</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-wa jinkak &gt;</td>
<td>-anuk</td>
</tr>
</tbody>
</table>
While we do find some work and research done for the language in the past, the variety that has been documented as part of the present study shows a slightly different analysis and values for the same. However, some close resemblances can be found to the work (Sharma, 1992).

1.2 Methodology

Data for this study was collected from the native speakers of Spiti by using the interview method, and it was recorded using a Zoom H1 Handy portable digital recorder in MP3/WMA format for further analysis. Hindi was used as the contact language to collect data. Permission and verbal consent for recording the sessions was obtained from all participants of this study before the data collection process, after informing them of all intricacies and formalities.

First, a pilot study was carried out for the language with two goals, i.e., to develop a general understanding of the language typology and to find proficient native speakers (also active speakers) for the language who had lived in their homeland for at least fifteen years of their formative year before migrating to other places for job/education (if any). Basic information was collected from informants identified for the study, and a sociolinguistic profile was generated for each of them.

Then, two primary fieldwork questionnaires were employed in this study to decipher the complete verbal paradigm. This was the core study. The first questionnaire was the “Basic Sentence List” (Abbi, 2001, 248), and this was used to get a preliminary impression of various grammatical categories found in the language.

Once the preliminary study was processed, data was collected for the second questionnaire (Mehta, 2016, 79). Since every sentence of the second questionnaire employs the use of various kinds of linguistic stimuli or context of use, much information on temporal, aspectual, and modal significations in the language was collected. The last few questions in this questionnaire also included short narrations that were compiled for various contexts, and this proved to be very useful in understanding the frequent patterns and morphological strategies employed by the language consultants and, thus, proving to be valuable in identifying and understanding the various indigenous categories used in Spiti. After the data from both these questionnaires were processed, some more data was collected (from the other two questionnaires) to fill any gaps and just complete the entire inflectional paradigm to get a complete picture of the morphology employed in the language.

In terms of data processing, first, all the data was analyzed in Praat, for which acoustic analysis was performed to decipher all the phonetic sounds of Spiti and its various phonological features. Once that was done, the data was transcribed using IPA (International Phonetic Alphabet) symbols and annotated according to the Leipzig glossing rules. Morpheme-to-morpheme gloss was provided for all the sentences, along with their interlinear gloss in English.

1.3 A Brief Introduction to the Language

Ethnologue (Eberhard, Simons & Fening, 2023) discusses Spiti as a Western-Central language of the Central Bodish group of the Western Tibeto-Burman language family. Regarding the EGIDS vitality scale formulated on Ethnologue, Spiti is presented as a ‘stable’ language with a medium-sized speaking population, and the following graphical representation illustrates the same. The green dot in the following representation reveals that Spiti is spoken in the household and community domains.
The data collected as part of the sociolinguistic profile also suggests that Spiti is spoken among all family members in the domain of the household. But at the level of administration and institutions, other dominant languages like Hindi and English are used.

During fieldwork, one of the primary consultants, Mr. Thinle Gyatsong, indicated that Spiti was vital in binding their community, faith, and culture together. Speaking Spiti is seen by the community as a symbolic representation of being a part of the Spiti culture and maintaining their identity. An encouraging piece of information that he shared was that since the last decade, the Spiti community of Sangam village has started encouraging parents to speak with their children in Spiti at home and is encouraging every child to learn to speak Spiti at a very young age. Even primary education is provided in Spiti, along with a little Hindi in schools.

As time progresses, the children learn to speak Hindi and grasp the basics of English. By the time they are in middle school, English and Hindi are taught as subjects at school. A few children tend to migrate to neighboring towns like Keylong, Kullu, and Shimla after middle school, while others complete their high school in Spiti itself. Since the last few years it has been a trend that most of the high school graduates migrate to various parts of the country in search of better academic opportunities and employment.

Spiti, Hindi, and Bhoti are used in the marketplace and among traders. All religious and cultural events and festivals are performed in the Spiti language, and every community member is expected to abide by the same. All administrative functions use English and Hindi, but interaction with the community is made in both Hindi and Spiti.

1.3.1 The Spiti Lexicon

The first look at the Spiti lexicon reveals a general Tibetan influence and a striking resemblance to neighboring languages like Ladakhi and Tod. The following table illustrates some instances of the same by comparing data of Tod and Ladakhi data.

Table 3 Lexemes in Spiti with their counterpart in Tod, Ladakhi, and Tibetan (Sharma, 1991, 5-8)

<table>
<thead>
<tr>
<th>Spiti</th>
<th>Ladakhi</th>
<th>Tod</th>
<th>English transliteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>sa-</td>
<td>za-</td>
<td>sa-</td>
<td>“eat”</td>
</tr>
<tr>
<td>me</td>
<td>me</td>
<td>me</td>
<td>“fire”</td>
</tr>
<tr>
<td>dimo/dimu</td>
<td>demo</td>
<td>de?mo</td>
<td>“beautiful”</td>
</tr>
</tbody>
</table>

There are also quite a few indigenous words in Spiti that did not seem to have a Tibetan origin. The following table enlists a few of them below. Once again, the Tibetan and Ladakhi cognates are enlisted below. Their Tibetan and Ladakhi counterparts are also tabulated to clarify and specify the variation.

Table 4 Lexemes in Spiti and Ladakhi with their Tibetan counterpart (Sharma, 1991, 5-8)

<table>
<thead>
<tr>
<th>Spiti</th>
<th>Tibetan</th>
<th>Ladakhi</th>
<th>English transliteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>tu</td>
<td>butʃa</td>
<td>butʃʰa</td>
<td>“boy”</td>
</tr>
<tr>
<td>tʰamo</td>
<td>srampo</td>
<td>ʂramo</td>
<td>“thin”</td>
</tr>
<tr>
<td>buta</td>
<td>siŋ</td>
<td>toanmo</td>
<td>“tree”</td>
</tr>
<tr>
<td>pʰase</td>
<td>zegpa</td>
<td>dukʃes</td>
<td>“ascend”</td>
</tr>
<tr>
<td>pijì</td>
<td>zimi/tʃila</td>
<td>bila</td>
<td>“cat”</td>
</tr>
</tbody>
</table>

1.3.2 The Spiti Phonemic Inventory

Spiti’s inventory and general sound system is very similar to the surrounding languages. The following tables present the phonemic inventory of the language.

Table 5 Consonant sounds of Spiti

<table>
<thead>
<tr>
<th></th>
<th>Labio-</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bilial</td>
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<td>Stops</td>
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<tr>
<td>-asp</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>tʰ</td>
<td>dʰ</td>
<td>k</td>
<td>g</td>
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<tr>
<td>+asp</td>
<td>pʰ</td>
<td>bʰ</td>
<td>tʰ</td>
<td>dʰ</td>
<td>kʰ</td>
<td>gʰ</td>
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<tr>
<td>Fricatives</td>
<td>f</td>
<td>s</td>
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<td>Affricates</td>
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<tr>
<td>-asp</td>
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<td>dz</td>
<td>tʃ</td>
<td>dʒ</td>
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<td>+asp</td>
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<td>tʃʰ</td>
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<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>η</td>
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<tr>
<td>Flaps</td>
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<td>Laterals</td>
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<tr>
<td>Approximants</td>
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</tr>
</tbody>
</table>

Table 6 Oral vowels of the Spiti sound system

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>Low High</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Mid</td>
<td>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Mean Mid</td>
<td>ε</td>
<td>ə</td>
<td>ɔ</td>
</tr>
</tbody>
</table>
2.0 Agreement Morphology

Spiti is an SOV language and exhibits both subject-verb and object-verb agreement. The following data attempts to display instances of agreement. In sentences (1)-(5), we notice cases of subject-verb agreement, where the subject is the controller of the agreement and the verb is the target. In contrast, sentence (6) can be said to be an instance of object-verb agreement, where the object takes control of agreement, and the object’s feature values are reflected on the target.

(1) \( kʰo \) pʰerra-tʃiɡ Təsʰal-soŋ
he.3M.SG.NOM instance-one cough.V-PFV.3SG
‘He coughed once.’

(2) \( kʰo \) pʰerra-tʃiɡ Təsʰal-soŋ
she.3M.SG.NOM instance-one cough.V-PFV.3SG
‘She coughed once.’

(3) \( ŋa \) tʰiriŋ kʰʋəlla rətʰokp-in
I.1F.SG.NOM today him.3M.SG-ACC/DAT meet.V-.PFV.1SG
‘I met him in the market today (morning)’

(4) \( ao-gja \) nəŋmu leva mʰi-pʰe-t
we.1PL tomorrow work.N NEG-do.V-.PROG.1PL
‘We will not be working tomorrow’

(5) \( ŋa \) ŋəŋmu leva mʰi-pʰe-t
I.1SG tomorrow work.N NEG-do.V-.PROG.1SG
‘I will not be working tomorrow’

A feature-based approach is adopted to present the data. Hence tense, aspect, mood, and agreement are presented as features that the verbs in the language inflect for with various values.
‘He has read this book completely’

In an attempt to look at whether the verbs of the language inflect for the features of Gender and Number, let us first compare (1) and (2) (where the subject is masculine and feminine, respectively). Even though the controllers of the verb “cough” vary in terms of Gender in both instances, the verb does not morphologically reflect the difference overtly on the verb. The same is the case with the feature Number as well.

In (3) and (4), where the grammatical context and conditions for agreement are the same and the only difference in the controllers is in terms of the feature Number (the first is plural and the second is singular, respectively), we still do not see this difference reflected on the verb in terms of the morphology of the verbal inflections.

Verbs in Spiti morphologically, however, do reflect different value combinations concerning the feature, Person. Let us look at sentences (1) and (2) again to understand how the Person feature functions in the agreement morphology. We notice -soŋ, which reflects the value of the third-person singular perfective aspect on the verb “cough.” However, on the verb “meet” in (3), we see a different inflection on the verb “meet.” This is because the controller of the agreement is “I” in (3), which inherently has the values of the first-person singular, which are copied and reflected on the verb along with the perfective aspect as the inflection -in, instead of -soŋ.

Throughout the data, the overt exponents of second- and third-person agreement were found to be the same in Spiti as compared to the first-person value representation. So, a first-person versus second and third-person agreement system can be established for Spiti in terms of the value they reflect morphologically. Formality or respect or the feature Honorificity in Spiti can be viewed as a feature that is inherently present on the controller, a change that is not overtly reflected and exhibited on the verb.

3.0 The Morphology of Tense, Aspect, Mood, Evidentiality - TAME

TAME in this paper is viewed as a grammatical phenomenon that plays a central role in the grammar of most languages. Spiti speakers use two kinds of morphological strategies to mark information about TAME in the language. The first is the use of particles that are almost always found to be at the end of the clause, and the second is in the form of affixes/inflections on the verb. Upon analysis, it was found that these typically signal aspectual, evidential and modal information and also information about the controller’s agreement in Spiti.

As we will notice in the following sub-sections, a single exponent in the language can be envisioned as representative of TAME and agreement features. The representative exponents for these feature values attach themselves to the verb root. Even though the controllers of the various agreement features inherently possess and inflect for the features of Person, Number, and Honorificity, the variation in the values, as reflected on the verb, are found to be sensitive only to a change in the feature Person. Therefore as proposed in the last section (cf. Sec. 2.0), a First-Person versus Non-First-person-based system-based analysis is rendered in the following sections of the paper.

Before moving further into the analysis of the verb inflections of Spiti, it becomes crucial to acknowledge an observation that may have implications on the commentary of the language variation in Spiti and its morphology in general. A close look and analysis of the data from each speaker of Spiti (those involved...
in this study) reveal that there is a variation in terms of the verb stem used by the same speaker for each verb, i.e., sometimes he/she may use one stem and in another instance, they use another stem for the same verb.

For example, the verb “laugh” has a total of five different stems in Spiti, namely got-, gotp-, gok-, goke- and go- onto which the respective verb inflections are added. In the case of this verb, we can easily account for the usage of each of these based on the environment or context of the feature bundle that is to be added to get the desired inflected verb. The following table presents the same.

Table 8 Stems of the inflected verb “laugh” with various feature value combinations

<table>
<thead>
<tr>
<th>Stem</th>
<th>Verbal feature bundles</th>
</tr>
</thead>
<tbody>
<tr>
<td>go-</td>
<td>DEO (1P, 2P, 3P)</td>
</tr>
<tr>
<td>got-</td>
<td>IPFV(2P, 3P), PFV(2P, 3P), PROG (2P, 3P), COMPL(1P, 2P, 3P)</td>
</tr>
<tr>
<td>gok-</td>
<td>EPIS(1P, 2P, 3P), POT(1P, 2P, 3P)</td>
</tr>
<tr>
<td>goke-</td>
<td>IPFV(1P), PROG (1P)</td>
</tr>
<tr>
<td>gotp-</td>
<td>PFV(1P)</td>
</tr>
</tbody>
</table>

The above morphology-based classification of verb stems, however, doesn’t remain valid for all the other verbs in Spiti. As seen in Table 9, even though the verb “do” has five stems coincidently, the representative value combinations are different for each of the stems. So we can conclude that this kind of morphology-based classification of stems would not work on accounting for the Spiti verb stems.

Table 9 Stems of the inflected verb “do” with various feature value combinations

<table>
<thead>
<tr>
<th>Stem</th>
<th>Verbal feature bundles</th>
</tr>
</thead>
<tbody>
<tr>
<td>pe-</td>
<td>IPFV(1P), PROG (1P)</td>
</tr>
<tr>
<td>pek-</td>
<td>IPFV(2P, 3P), POT(1P, 2P, 3P), EPIS(1P, 2P, 3P)</td>
</tr>
<tr>
<td>peu-</td>
<td>PFV(1P)</td>
</tr>
<tr>
<td>pet-</td>
<td>COMPL(1P, 2P, 3P), PFV(2P, 3P)</td>
</tr>
<tr>
<td>peken</td>
<td>PROG(2P, 3P)</td>
</tr>
</tbody>
</table>

The next option available is to look for a phonology-based classification and environment for the same. In the case of the verb “laugh”, the exponent that is a representative of the bundles of feature values of IPFV (2P, 3P) and POT (2P, 3P) is the same, i.e., -ak. However, the stem for both is different, i.e., got- for IPFV (2P, 3P) and gok- for POT (2P, 3P). The same is the case with many other verbs as well. So a phonological (environment-based) classification of the stem index becomes problematic as well.

Thus an attempt to account for the verb stem based on the phonological and morphological features can be ruled out. It is, however, in the light of the discussion of the Latin ‘third stem’ in Aronoff (1994), the Italian congeneric of the Latin third stem in (Vogel, 1993), and the stem system of Sanskrit (as discussed in (Stump, 2001) that some clarity can be achieved about the same.

Each of the above-mentioned deliberations discusses the respective verb stems as being “morphomic” in nature, i.e., as being morphological patterns that are completely “unhinged,” which is very much the case in
Spiti. Aronoff first coined this term (Aronoff, 1991, 25) to single out cases where “more than one morphosyntactic feature array mapped onto the same set of phonological realizations.”

There is another interesting observation that may have great implications in unfolding the mystery surrounding the verb stems in Spiti. While communicating, the speakers of the Pin dialect, tend to employ the use of verb stems from the adjacent varieties, i.e., Tod and Kaza as well and use them interchangeably for the same verb. Not just in the case of verbs, but also in the case of inflections, pronouns, and nouns, this phenomenon is very common.

For example, in the case of the verb “do”, three different stems from different varieties of the verb were used by the primary language consultant of this study, namely pe- (Pin), taŋ- (Kaza), and ɗoe- in many instances. Thus, a study of all the neighboring varieties of the Spiti spoken in Pin could prove to be very useful in discussing the contact situation and language variation of Spiti.

3.1 Aspect

Comrie (1976, 3), Bybee (2003, 157), and Smith (1991) propose that to recognize the “state expressed by the verbs” of any language and to better understand the temporal view of the event in question, a study of the aspectual information is necessary. Various aspects distinguish different ways of “viewing the internal temporal constituency of the same situation.” Aspect is often indicated in the form of verbal inflections in the language.

According to Smith (1991), the minimal set of aspectual values found in languages is two and the most frequent of them is the opposing values of Perfective (temporal view as a simple whole) versus Imperfective (temporal view as interior composition). While a few languages have a single category to express imperfectivity, others subdivide it into distinct sub-categories.

The various aspectual combinations in Spiti are found to play a very important role in expressing various temporal situations in the language as well (cf. Sec 3.4). Spiti verbs were found to inflect for values of Imperfective, Perfective, Progressive, and Completive aspects.

3.1.1 Imperfective aspect

The imperfective aspect is used to express or focus only on the part of the situation that neither includes the internal initial or final endpoint. The imperfective aspect is formed in Spiti by attaching a single exponent to the verb root. If the controller of the agreement is of the value first-person singular or first-person plural, then -t attaches to the verb root. In example (8), since the agreement of the verb “throw” is with the pronoun ga meaning “I”, the verb reflects -t on the verb root as the representative of the same.

However, if the controller is of the feature values second-person singular or second-person plural or third-person singular or third-person plural, then -ak attaches to the verb root. In example (7), since the controller of the verb agreement is the third-person singular entity, -ak is reflected on the verb root as a representative of the same. The imperfective construction is also used to connote the habitual aspect in Spiti, i.e., a situation that is characteristic for an extended period and happens regularly (as seen in the following example (7)).

---

3 It is spoken in both places, i.e., in the Pin Valley and Kaza
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3.1.2 Perfective aspect

When the attempt is to convey information about the event in its entirety and with the inclusion of both the initial and final endpoints, the perfective aspect is used in Spiti. The event described by the verb is viewed from the outside as a complete whole. In Spiti, the perfective aspect is formed with the addition of a single exponent to the verb root. If the controller of the agreement is of the values first-person singular or first-person plural, then -in is attached to the verb root. In the case of other feature combinations of the second-person singular or second-person plural or third-person singular or third-person plural with the perfective aspect, -soŋ attaches4.

In both (9) and (12), we find that both the controllers “Ram” and “he” of the respective sentences are the third-person singular entities, so -soŋ is reflected on the verb to display agreement with them. In (10) and (11), we notice that the controller of the agreement is a first-person singular feminine entity, “I” and a first-person masculine entity, “I” respectively, and therefore to reflect on the agreement with the same, -in is attached to the verb root. Both these sentences also help us reflect on the fact, once again, that gender agreement is not overtly reflected on the verbs in Spiti.

4 In a handful of such instances, -zoŋ was used instead of -soŋ. It looks like a dialectical variation of Spiti that has simultaneously been incorporated along with his own and no phonological basis for the same was found.
3.1.3 Progressive aspect

The non-stative verbs in the language exhibit the progressive aspect to present that they are “ongoing” in Spiti. They are represented as an exponent that is attached to the verb root. If the controller of the agreement is of the value first-person singular or first-person plural, then -t is attached to the verb root. In the case of other feature combinations like second-person singular or second-person plural or third-person singular, or third-person plural, -ok attaches.

In (13) and (16), since the controllers “brother” and “he” are of the value third-person singular, the exponent -ok/ok' that is a representative of the progressive aspect third-person singular is attached to the verb root. On the other hand, in (14) and (15), since the controllers are first-person singular and plural, respectively, a representative of the same feature value combinations -t is attached to the verb root to denote the progressive aspect.

(13)  n³-no                         samd-ok-ki                     tʰiriŋ                      tfʻu                        tʰəŋmu
       my-                          think.V-                      today                       water.N                     cold.N
       brother.N.3M.SG              PROG.3SG-that

j-o-to
be-EPIS.3SG

‘My brother is thinking that the water will be cold today’ (but it was wrong)

(14)  n³a                         taksəŋ                        tfʻti             tʰie-t
       I.1F.SG                      now                          letter.N                   write.V-
                                          PROG.1SG

‘I am writing a letter now’

(15)  ao-gja                     naŋmu                         leva                         m³i-p⁶-e-t
       we.1PL                       tomorrow                      work.N                     NEG-do.V-
                                          PROG.1PL

‘We will not be working tomorrow’

5 If the exponent is not in the word final position, it is pronounced as ok. Sometimes an alternate pronunciation ok’ is used instead of ok', but it is very rarely used.
3.1.4 Completive aspect

When the attempt is to denote that the event being spoken of is completed (completely), then the verbal aspect of completive is used in Spiti. In the absence of an overt realization of past tense in Spiti, this vibrant aspect plays a very important role in determining the typical past reference for an event, specifically as it being “over.” Like the perfective and imperfective aspects, the completive aspect is also characterized as a single exponent on the verb. It is interesting to note that for all of the various possible permutations of the agreement features, the same exponent is used, i.e., -sar.

In the following examples, the controllers of the verb agreement are different (i.e. first-person singular, third-person singular, and third-person singular, respectively), and yet the exponents that represent the combination of the feature values are found to be the same.

(16) kʰɔŋ gʰɔŋ-ta tʃɪɡ-ŋaɡi tʰsal-d-oɔ́
he.3M.SG hour.N one-from cough.V- PROG.3SG

‘He has been coughing for an hour’ (reply to an inquiry regarding the child’s state of cough)

(17) eʰɔ kʰoŋ-la tʰuk-sar
I.1M.SG he.3M.SG- meet.V- COMPL.1SG

‘Yes, I met him’ (completed the task of meeting him)

(18) tenne sâp fi-soŋ-sak
then snake.3.N die.V-PFV.3SG- COMPL.3SG

‘Then the snake died’

(19) kʰɔ i kɪtəb-pura sɨl-sar
he.3M.SG this book.N-full read.V-PFV.3SG

‘He has read this book completely’

3.2 Mood

Foley et al. (1984), Hengeveld (1988) and Palmer (2001) all propose that to understand the speaker’s perspective of an event or the real actuality of the event, grammatical mood is reviewed by linguists. In languages that display a vibrant system of modal distinctions, we find the use of two prominent kinds of parameters that are established to calibrate modal distinctions. The first one deals with the speaker’s “judgment and perspective” of the actuality of the event. The second one deals with a kind of “requirement” that encourages the speaker to himself/herself get involved in the action or get someone else to get involved in the same.

The first parameter establishes what we call the ‘epistemic mood,’ and the second parameter establishes the ‘deontic mood’ (Palmer, 1986), both of which are present in the language. In the following
3.2.1 Epistemic mood

The use of epistemic mood in Spiti signifies the speaker’s judgment about an event as being plausible, mostly either based on some logical inference that is grounded on some past experience or probability. Epistemic mood is conveyed in the language by attaching the exponent -ɛʈʈ to the verb root.

It was noticed that when the verb root ends in j (found only in the case of the verb “be” so far), -oʈʈ is used instead of -ɛʈʈ. In both (20) and (21), the controller of the agreement is a third-person entity. However, in (21), since the verb root ends in j, -oʈʈ is used to reflect the agreement. In (20), since the verb root does not end in j, the exponent -ɛʈʈ is used to display the agreement.

(20)  ṛam  lʊ  təŋɛʈʈ  ṛam.3M.SG  song.N  sing.V-EPIS.3SG  ‘Ram may sing the song’ (the remains very doubtful)

(21)  naŋmu  tʃʰu  təŋmu  j-oʈʈ  tomorrow  water.3N  cold.ADJ  be.V-EPIS.3SG  ‘Tomorrow, the water will be cold’

3.2.2 Potential mood

When there is a very strong possibility for the occurrence of the event in question, then the speakers of Spiti incorporate the potential mood marker in their utterances. There are two possible options available to the speakers to express potential mood, and the choice for the same is based on the matching of the value combinations with the controller of agreement.

If the controller of the agreement is of the value first-person singular or first-person plural, then -en/-en is added to the verb root (as seen in example (23) where “I” is the controller of the agreement). For the other feature combinations, i.e. second-person singular or second-person plural or third-person singular or third-person plural of the potential mood, -ak is added to the verb root (as seen in the example (22) where “water” is the controller of the agreement).

(22)  ɲʰi-ːno-la  daŋ  gويد-ok-ki  tʰirɨŋ  tʃʰu  my-brother-ACC/DAT  yesterday  know.V-PROG.3SG-that  today  water.3.N  ‘My brother was knowing yesterday that the water will be cold today’

I promise that I will come to see you tomorrow'

3.2.3 Deontic mood

Deontic mood is generally action-based in languages, and its use makes the requirement of and commitment to a task appear in the utterance. Thus, when the requirement in the utterance is to cause or force the hearer to carry out an action or get someone else to act, Spiti employs an exponent \( gufuk \) to mark it. This exponent attaches itself to the verb root, following which no further exponents were found to be added. For example:

\[
(24) \quad k^\text{on}-la \quad topt\text{a} \quad sar-gufuk
\]

\[\text{they.3PL- food.N eat.V-DEO}\]

‘They will have to eat the food.’

\[
(25) \quad k\text{oa}-la \quad d\text{go-gufuk}^\text{’}
\]

\[\text{he.3M.SG- go.V-DEO}\]

‘He should go’

3.3 Evidentiality

Many languages of the world require the speaker of the language to specify in their utterance, the type of source on which his/her statement is based on. These specifications are marked morphologically in the utterance in the form of either clitics, auxiliaries, or particles in a majority of these languages. Evidentiality is the grammatical category that deals with the same and whose primary signification is the representation of the information source.

Aikhenvald (2004) proposes that evidentiality is a category of its own and not just a sub-category of any modality and can and should be viewed independently of tense, aspect, and mood in languages. Based on her survey of languages that denote evidentiality, she proposes a typology of evidential systems grounded on the language’s size and kind of evidential.

The following sub-sections present Spiti as a ‘three-term system’ according to Aikhenvald (2004), and more precisely, the B\textsubscript{3} type, i.e., ‘Visual, Non-Visual sensory and Reported’, which is relatively uncommon to find. The type found in Spiti is a bit more specified in terms of the implication of the three sensory-based information. Thus, they are termed ‘Visual, Tactile, and Auditory’ in the following sub-sections of this paper.

3.3.1 Visual Evidential

When there is some kind of visual evidence on which the assessment of the speaker’s judgment is based, Spiti employs the use of a visual evidential marker. It is represented by \( duk^\prime \) that is found at the end of the sentence. In all of these cases, the speaker’s assessment of the event in question is based on his observation. As we see in (26) and (27), the speaker is making both these statements based on what he/she is viewing, while still standing in proximity to the subjects of the utterance.

\[
(26) \quad oi \quad i \quad k^\text{on\textsubscript{ba}} \quad min^\text{\textsubscript{enmo}}
\]

\[\text{VOC this house.N very.ADV big.ADJ}\]
‘This house is big’ (this statement is made by the speaker when he standing in front of the house and is talking about the house to his sister)

(27) tʃʰəʊuə ɡɫʊuə ɡiəptʃi dukʰ
    rain.N fast.ADV fall.V.INF V.EVI

‘It will rain soon’ (there are black clouds in the sky)

3.3.2 Auditory Evidential

In Spiti, when the judgment of an event is based on some kind of auditory evidence, a different particle is used to signify the same. It can represent both hearsay and actual sense based-experience of hearing. It is represented by sakʰ which is found at the end of the sentence. So if the speaker, for example, wants to convey something that was told to him by someone (as in examples (28) and (29)), he would convey the heard information and then attach the auditory evidential marker at the end of the sentence to signify that the said information was something that was told to him.

(28) dαŋ nʃi-no sarrɑ-ki kʰo tʰiɾiŋ
    yesterday my-brother say.V-that 3M.SG today

‘My brother said yesterday that he will be here today’

(29) sãp fɪ-sɔŋ-sakʰ

‘Then the snake died’ (brother had shared this information and the speaker is conveying the same)

3.3.3 Tactile Evidential

When in the utterance, the Spiti speaker wishes to inform that whatever he/she is conveying is grounded on their own touch-based experience or tactile experience, then this tactile evidential marker is used. It is represented by tʰɔk which attaches at the end of the sentence. Since the speaker in (30) is making his statement based on the information that he has received from his brother, the same is reflected in the utterance with the help of tʰɔk.

(30) nʃi-no ʃαsɑŋ sarrɑ-ki tʃʰu tʰʰɑŋmu
    my-brother now say.V-that water.N cold.N
tʰɔk
    T.EVI

‘My brother now said that the water is cold’ (brother is truthful and trustworthy, and the water body is out of sight now)

All three evidentials in Spiti are compatible with each other and can be used in a sentence concurrently if the need for the same to be represented arises. For example, in (31), two kinds of evidentials are used simultaneously. This is so because the information of the “water being hot” was touched and experienced by the speaker’s brother and then told to the speaker. Therefore in conveying this fact of the “water being hot”, the speaker also conveys that he had heard it from someone else who, however, had experienced it. So, first,
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the tactile and then the auditory evidential are used in the utterance, respectively, to mirror the order in which the information was obtained from evidentiary sources.

(31)  
\[
\begin{array}{cccc}
\text{dʰəŋ} & \text{tʰu} & \text{tʰuənmu} & \text{tʰak} \\
\text{yesterday} & \text{water.N} & \text{hot.ADJ} & \text{T.EVI} \\
\text{saŋ} \\
\text{A.EVI}
\end{array}
\]

‘Yesterday the water was hot’ (heard from someone who experienced it)

3.4 Tense

Tense is defined as the “grammaticalized expression of location in time” in Comrie (1985, 9). In the literature, tense has been broadly classified as either being relatively or absolutely. While absolute tense indicates time in association with the time of utterance, relative tense indicates a certain time’s relationship to some other time that is used as a reference.

Languages employ a variety of tense markings to locate situations in time. It is morphologically realized in language at either sentence or verb phrase level in the form of auxiliaries, periphrastic constructions, particles, or verb inflections. Some languages tend to conceptualize and represent time as a three-way distinction of Past (time before the moment of utterance), Present (time during the moment of utterance), and Future (time after the moment of utterance) while some others opt for a Future versus Non-Future (as found in Karitiana of Tupi stock) or a Past versus Non-Past system (as found in Mewahang) of tense. It is interesting to note that a couple of languages like Mandarin Chinese, Burmese, Dyirbal, and Navajo have been found to lack any grammatical marking for tense. Instead, these use other interesting strategies to represent time in the language.

To understand how Spiti reflects tense in the language, let us look at the following sentences. It will be interesting to note that based on the data from the following sentences, we can ascertain that Spiti doesn’t morphologically mark tense in the language. Spiti is what linguists would call a ‘tenseless’ language. Even though the difference in time reference isn’t grammaticalized in Spiti, deductions about time reference are made with the help of various aspectual and modal constructions, temporal adverbials, modal verbs, and pragmatic reasoning.

In (32), the use of the completive aspect with the verb “laugh” conveys that the event is completed, and thus a past deduction is achieved by the hearer of the utterance. On the other hand, in (33), with the use of the temporal adverbial “yesterday”, the occurrence of the touching of the water (implied by the use of the tactile evidential) and the realization of it being hot is conveyed as a past event.

(32)  
\[
\begin{array}{cc}
\text{pommu} & \text{got-sar} \\
\text{girl.N.3F.SG} & \text{laugh.V-COMPL.3SG}
\end{array}
\]

‘The girl laughed’

(33)  
\[
\begin{array}{cccc}
\text{dʰəŋ} & \text{tʰu} & \text{tʰuənmo} & \text{tʰak} \\
\text{yesterday} & \text{water.N} & \text{hot.ADJ} & \text{T.EVI}
\end{array}
\]

‘Yesterday water was hot’ (statement based on touch)

The same sentence (33) without the temporal adverbial, implies a present-time scenario, as seen in (34), where the hearer of the utterance understands that the speaker has touched the water and is thus conveying the fact that the water is hot.

(34)  
\[
\begin{array}{cccc}
\text{tʰu} & \text{tʰuənmo} & \text{tʰak} \\
\text{hot.ADJ} & \text{T.EVI}
\end{array}
\]

‘The water is hot’ (implied by the use of the tactile evidential)
Another way to indicate present temporal reference is with the help of aspectual information accompanied optionally with the temporal adverbial like “now”, as in (35).

(35) pommu (taksan) got-ak’
girl.N.3F.SG now laugh.V-
PROG.3SG

‘The girl is laughing (now)’

The progressive aspect, the imperfective aspect (including instances of the habitual aspect), the potential mood, and the three evidentials in the language can be found to be frequently used in various combinations (based on the context) to denote to present temporal reference in Spiti. For example, as seen in both (36) and (37), the modal exponent of potential mood and temporal adverbial “tomorrow” are key in understanding the future undertone in Spiti in the respective sentences.

(36) pommu gok-ak’
girl.N.3F.SG laugh.V-
POT.3SG

‘The girl may laugh’

(37) ŋaŋmu tfºu tºenmo jonj-ak’
tomorrow water.N hot.ADJ become.V-
POT.3SG

‘Tomorrow water maybe be hot’

Other than these, the use of the epistemic mood (as in (38)), and deontic mood (as in (39)) is also helpful in signifying various shades of the implication of the future.

(38) kºŋba bava j-otto
house.3M.SG dirty.ADJ be.V-EPIS.3SG

‘The house may be dirty’ (since the house was locked for a couple of days)

(39) tfºrawa gjova qjəp-gufuk’
rain fast.ADV fall.V-DEO

‘It should rain soon’

Along with all these factors, one factor that clarifies the time reference in the language for the utterance is pragmatic reasoning or contextual information. Often, the context-setting temporal adverbials or individual lexical words used in the utterance work towards narrowing down the temporal location of an event. For example, in (40), the context of the subject of the sentence is set as being ill, and “for an hour” duration mentioned along with the verb “cough” inflected with the perfective aspect helps to convey that the event was a past occurrence. In (41), “after few minutes” coupled with the “fall of rain” gives the future connotation to the utterance.

(40) kº ho gºəŋta tfig sukpa tºal-soŋ
he.3M.SG hour one duration cough.V-
PFV.2SG/3SG
‘He coughed for an hour’ (the brother of the speaker is ill)

(41) njonse minaŋt gamma tʃəرعا gjaŋptʃi
little.ADJ minute.N after.ADV rain.N fall.INF
duk’ V.EVI
‘It will rain in a few minutes’ (black clouds are in the sky).

4.0 Conclusion

With the tremendous amount of enthusiasm from the language speakers and the quality of the overwhelming data received, this study aimed to present a basic sketch of the morphology of tense, aspect, evidentiality and mood of Spiti. This analysis remains to be the first documentation attempted of the TAME system of Spiti of the Pin Valley.

As part of the present analysis of Spiti, various values for aspect, mood, and evidentiality were found, many of which could be perhaps an areal feature of the languages in the locale or/and are as a result of membership of the Bodish group of the Tibeto-Burman language family. These directions of thought will once again need some further study and analysis before any further claims are made in this direction.

Upon analysis, the vibrant system of evidentiality and the fact that Spiti is a grammatically tenseless language were found to be the highlights of the analysis. It was found that deductions about time reference are made in Spiti very efficiently by the speakers with the help of various aspectual, modal constructions, temporal adverbials, modal verbs, and pragmatic reasoning.

While this is just a small start at decoding the morphological strategies to decipher the TAME connotations in Spiti, there is a need to engage more research in Spiti, collect more detailed data with a strong methodological backing so as to understand the workings of the language more precisely.

Finally, the following tables depict a snapshot/summary of the sketch presented in this paper taking two verbs, i.e., “to laugh” and “to do” in Spiti, so that a complete picture of the paradigm is achieved.

Table 10 Verbal paradigm for the verbs “to laugh” - gottʃi and “to do” - pʰenna in Spiti.

<table>
<thead>
<tr>
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<th>2P, 3P</th>
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<td>gok-ak’</td>
</tr>
<tr>
<td>Perfective</td>
<td>gotp-in</td>
<td>got-soŋ</td>
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<tr>
<td>Progressive</td>
<td>gotk-</td>
<td>got-ok’</td>
</tr>
<tr>
<td>Completive</td>
<td>got-sar</td>
<td>got-sar</td>
</tr>
<tr>
<td>Epistemic</td>
<td>gok-ɛʈʈo</td>
<td>gok-ɛʈʈo</td>
</tr>
<tr>
<td>Deontic</td>
<td>go-gufuk’</td>
<td>go-gufuk’</td>
</tr>
<tr>
<td>Potential</td>
<td>gok-en</td>
<td>gok-ak’</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1P</th>
<th>2P, 3P</th>
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<tr>
<td>Imperfective</td>
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<tr>
<td>Perfective</td>
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<td>pet-soŋ</td>
</tr>
<tr>
<td>Progressive</td>
<td>pʰe-t/pe-t</td>
<td>peken-ok’</td>
</tr>
<tr>
<td>Completive</td>
<td>pets-ar</td>
<td>pet-sar</td>
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<tr>
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<td>Deontic 6</td>
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</tr>
<tr>
<td>Potential</td>
<td>pek-en</td>
<td>pek-ak’</td>
</tr>
</tbody>
</table>

6 The feature of deontic mood isn’t used with the verb “do” in Spiti and is instead reflected on the main verb, very much like the case in English where the sentence like “you should write” is grammatical and “*you should do write” is ungrammatical. Hence this cell of the paradigm has been left blank.
References


**Brief bio of Corresponding author:** My name is Dr. Shreya Mehta. After completing my M.A., M.Phil., and Ph.D. from Jawaharlal Nehru University (New Delhi), I am currently working as the Temporary Assistant Professor of Linguistics at the Department of Linguistics of the Maharaja Sayajirao University of Baroda (Vadodara). My areas of interest are Agreement Morphology, Inflectional Morphology, Language Documentation, and Applied Linguistics.