

# Perfective and imperfective from the same source

## Directional ‘down’ in rGyalrong\*

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Extensive typological research on spatiotemporal development has shown that directionals tend to start as ‘bounders’, and eventually grammaticalize into perfective or simple-past markers. Meanwhile, recent crosslinguistic studies of tense and aspect have demonstrated that the opposition between perfective and imperfective is the most general contrast expressed via verbal morphology. This paper, however, presents a clear counterexample to the above commonly accepted generalizations. Specifically, rGyalrong languages show a perfective-imperfective distinction, but the past imperfective marker and one of the perfectives developed from the same source — the directional ‘down’. This study thus documents a previously undescribed development, through which a single directional has grammaticalized into two opposing aspectual categories. The unexpected spatiotemporal development presents a challenge to the approach of grammaticalization studies that focuses on ‘major’ developmental pathways.

**Keywords:** grammaticalization, aspect, directional, locational, perfective, imperfective, rGyalrong

### 1. Introduction

rGyalrong verbal morphology presents a case of historical enantiodromia, in which the morpheme ‘down’ has acquired antonymous semantics, being used

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\* I would like to thank Carol Genetti, Marianne Mithun, Sandra Thompson, Jackson T.-S. Sun, Joe Salmons, and Brian Joseph for valuable comments and discussions on the content of this paper. I am very grateful to my rGyalrong friends for generously sharing their expertise on their native languages. Two anonymous reviewers provided valuable, detailed comments, which are deeply appreciated. Special acknowledgement goes to Jonathan Evans for proofreading and editing earlier drafts. I would also like to thank Kobin Kendrick for his help and useful feedback, as well as Lea Harper and Mara Henderson for their moral support.

to denote both perfectivity and imperfectivity.<sup>1</sup> The unexpected development of these two opposite verbal categories presents a challenge to the approach of grammaticalization studies that focuses on ‘major’ developmental pathways.

Extensive typological research on the evolution of locational markers to tense-aspect categories has led to a number of important observations about the nature of the process. In particular, studies of Russian, Hungarian, and Georgian (Comrie 1976, Dahl 1985, Bybee et al. 1994), as well as Quechua (Hintz manuscript), have shown that in spatio-temporal development, directionals tend to start as ‘bounders’, and eventually grammaticalize into perfective or simple-past markers.

Recent crosslinguistic studies of tense and aspect (Comrie 1976, 1985, Bybee 1985, 1994, Dahl 1985, Bybee & Dahl 1989, Bybee et al. 1994) demonstrate that the opposition between perfective and imperfective is the most general contrast expressed via verbal morphology. Semantically, the notions of perfectivity and imperfectivity are mutually exclusive. Perfectivity indicates that an event is “limited, bounded or wholly contained within the event frame”<sup>2</sup> (Chung & Timberlake 1985:217, Comrie 1976); imperfectives, on the other hand, present part of a situation irrespective of its initial and final points, and thus are semantically open (Smith 1991:111). Isomorphism (a situation where two grammatical categories are represented by the same form) seems unlikely for these two disparate aspectual concepts.<sup>3</sup>

This paper, however, presents a clear counterexample to the above commonly accepted generalizations about the diachronic relationship between tense-aspect and directional marking. Specifically, rGyalrong languages show a perfective-imperfective distinction, but the past imperfective marker and one of the perfectives developed from the same source — the directional ‘down’. This study thus documents a previously undescribed development, through which a single directional has grammaticalized into two opposing aspectual categories.

With this goal in mind, after providing basic background information about the languages examined for this study (§2), the remainder of the paper profiles the formation and grammatical uses of perfective and past imperfective verb forms in three rGyalrong languages (§§3–4). The data presented demonstrate both the

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1. Kim (2009) has also observed that Korean aspectual markers of the perfective and imperfective domains (namely progressive, resultative, and anterior) have emerged from the same source. Kim’s analysis and mine were developed independently.

2. ‘Event frame’ is used by Chung & Timberlake to refer to an interval of time on which a specific predicate occurs (1985: 203).

3. A reviewer points out that Sanskrit appears to show similar isomorphism: The Imperfect of the verbs of the sixth class and Thematic Aorist are represented by the same form (Whitney 1962: 305).

functional differences between perfective and imperfective, as well as the isomorphism between the past imperfective and the ‘down’ perfective prefixes. Then, in §5, evidence will be provided to show that such isomorphism is not accidental, but resulted from the fact that the two forms share a common etymon. §6 discusses the possible semantic properties that may underlie the two metaphorical extensions through which the source concept of ‘down’ is mapped to two conflicting target domains. In §7, paths of development leading to the two tense-aspect categories from ‘down’ in rGyalrong will be proposed. §8 summarizes the findings and discusses the implications that the rGyalrong data bring to bear on the widely accepted emphasis on ‘major’ paths in grammaticalization.

## 2. rGyalrong: Background information

rGyalrong is a Tibeto-Burman subgroup spoken in the northwestern part of Sichuan Province, China. Three major languages — Situ (eastern), Sidaba (northwestern), and Chabao/Japhug (northeastern) comprise rGyalrong Proper, which, with languages Lavrung and Horpa, make up the rGyalrongic cluster in the Tibeto-Burman family.<sup>4</sup> This study is based on data gathered from each of the three languages in rGyalrong Proper: Caodeng (of Sidaba), Dazang (of Chabao/Japhug), and Zhuokeji (of Situ).<sup>5</sup>

## 3. Perfective verb form

### 3.1 Formation of the perfective verb form in rGyalrong

An important inflectional strategy of rGyalrong is the application of orientation prefixes in the formation of the perfective verb (J. Sun 2003: 496). The orientational meanings encoded by the prefixes form a system composed of vertical, solar, and riverine subsystems, each of which comprises two conceptually opposing terms (J. Sun 2000a: 24, 2003: 496, YJ Lin 2002), as illustrated in Figure 1.

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4. The inclusion of Lavrung and Horpa within the rGyalrongic subgroup was proposed in J. Sun (2000b), based on uniquely shared morphological features.

5. Unless otherwise specified, the Caodeng (Written Tibetan: *Tshobdun*) data presented here are courtesy of Jackson T.-S. Sun. The Dazang (Written Tibetan: *Dhetsang*) and Zhuokeji (Written Tibetan: *Lcogrtse/Mchogrtse*) data are based on my fieldwork between 1999 and 2009. My Dazang consultant is Narwumtsu (Written Tibetan: *Norbu'tsho*), aged 59 in 2009; and my Zhuokeji consultant, Yang Dongfang, was 56 years old in 2009. They are native speakers of Dazang and Zhuokeji respectively. The language names I use are Chinese renderings of their Tibetan equivalents.

Vertical		Solar		Riverine	
up	down	east	west	upstream	downstream

Figure 1. rGyalrong orientation systems

Each of these orientation prefixes can denote orientation, irrealis status (J. Sun 2007a), imperativity, and perfectivity.<sup>6</sup> Below are the forms of the orientation prefixes in the three rGyalrong languages.

Table 1. Perfectivizing orientation prefixes in Zhuokeji, Caodeng, and Dazang<sup>7</sup>

	Up	Down	East	West	Upstream	Downstream
Zhuokeji	<i>to-</i>	<i>na-</i>	<i>ko-</i>	<i>nə-</i>	<i>ro-</i>	<i>rə-</i>
Caodeng <sup>8</sup>	<i>tə-</i>	<i>ne-</i>	<i>kə-</i>	<i>nə-</i>	<i>le-</i>	<i>tʰe-</i>
Dazang	<i>te-</i>	<i>pə-</i>	<i>ke-</i>	<i>nə-</i>	<i>le-</i>	<i>tʰə</i>

These prefixes attach to an appropriate verb stem to form the perfective verb. Some verbs in rGyalrong have more than one stem form. The details of the alternation do not concern us here, except to note that the perfectivizing orientation prefix consistently affixes to STEM2, the same stem required in perfective and past imperfective, among others. The Dazang example below shows a non-alternating verb stem occurring with and without an orientation prefix. The verb form in (1a), with an orientation prefix *te-* ‘up’, conveys a perfective situation; while the bare stem in (1b) denotes generic or future meaning.

- (1) Dazang
- a. *lewi te-wowu*  
cat PFV-meow  
‘The cat meowed.’
  - b. *lewi wowu*  
cat meow:NPST  
‘Cats meow/ The cat will meow.’

Such formation of the perfective is reminiscent of perfective-verb formation reported for several Slavic languages, Margi (a Chadic language), and Mokilese (an Oceanic language). In these languages, verb stems marked by adverbial prefixes

6. It should be noted that, though semantically possible (e.g. one could in principle say ‘upward to the west’), in rGyalrong one never sees a single verb stem affixed with more than one orientation prefix at a time.

7. Presented for Caodeng in Table 1 are forms used with intransitive verbs. While used in third-person transitive verb forms, the rhyme of the orientation prefixes switches uniformly to *e* (J. Sun 2003).

that semantically correspond to English *up*, *down*, *over*, and *through*, for instance, are used to convey perfective, or in Dahl's terms, a sense of 'attainment of a limit' (Bybee & Dahl 1989). For example, the English *stand up* has a natural endpoint that is not inherent in *stand* alone; *pour out* implies the attainment of a limit, while *pour* alone does not. Adverbial prefixes as such are referred to as 'bounders' by Bybee & Dahl (1989). In many languages, these 'bounders' can be grammaticalized so that they can co-occur with many verb stems to form perfective verbs that contrast with verbs without such bounders, by which imperfective meaning is coded (Dahl 1985, Bybee & Dahl 1989, Bybee 1994, Bybee et al. 1994).

The reader may have also noted from example (1a) another property rGyalrong shares with Slavic languages in the usages of these 'directional' prefixes. In Modern Russian, for example, the orientationally specified prefix may endow a verb it attaches to with nothing but aspectual (i.e. perfective) meanings (Comrie 1976: 89, Dahl 1985: 84); likewise, the perfective prefixes in rGyalrong can be deprived of orientation semantics in favor of perfectivity. Thus, although in (1a) it is the orientation prefix meaning "up" (*te-*) that serves as the perfectivizer, the orientational meaning is obviously 'empty', and the prefix does not seem to have any effect on the meaning of the verb except for making it perfective.

Although all rGyalrong verbs can occur with an orientation prefix to form perfectives, it is not the case that all verbs can take any of the six orientation prefixes as their perfectivizer. Only motion verbs can occur with any of the six prefixes if the orientations they denote need to be specified. The following examples from Dazang illustrate such a case.

- (2) Dazang: perfective verbs forms with six specified orientations
- |                                       |  |
|---------------------------------------|--|
| <i>te-mtsax-a</i> "I jumped up"       | <i>pə-mtsax-a</i> "I jumped down"        |
| PFV:up-jump-1sg                       | PFV:down-jump-1sg                        |
| <i>ke-mtsax-a</i> "I jumped eastward" | <i>nə-mtsax-a</i> "I jumped westward"    |
| PFV:east-jump-1sg                     | PFV:west-jump-1sg                        |
| <i>le-mtsax-a</i> "I jumped upstream" | <i>tʰə-mtsax-a</i> "I jumped downstream" |
| PFV:upstream-jump-1sg                 | PFV:downstream-jump-1sg                  |

For non-motion verbs, usually only one or two orientation prefixes can serve as the default perfectivizer. The selection of such default perfectivizers is lexically determined. On the one hand, if a verb inherently encodes a specific orientation, it tends to select a prefix with matching orientation semantics as its default perfectivizer.<sup>8</sup> For instance, one can infer on semantic and pragmatic grounds that

8. This clearly involves metaphor, as pointed out by a reviewer.

the orientation concept ‘up/upward’ is inherent in the Zhuokeji verb *kɛ-rwɛs*<sup>9</sup> ‘to rise’; ‘to get up’, and indeed it takes the orientationally matching perfectivizer *to-* ‘up’. Prefixes like *to-* in this case are orientationally motivated but redundant, as the directionality they denote is already conveyed by the verb.<sup>10</sup>

Some representative Zhuokeji examples of verbs requiring ‘down’ as their semantically-matching perfectivizer include *ka-səku* ‘to bury’, *ka-t<sup>h</sup>em* ‘to lower (e.g. one’s head)’, *ka-ŋi* ‘to sit’, and *ka-jê* ‘to plant’.

In Caodeng, the solar contrast has been extended to a secondary opposition between centripetal (‘eastwards’, i.e., in the direction of this rising sun) and centrifugal (‘westwards’) notions (J. Sun 2000a: 12). Zhuokeji shows the same extension. If *ko-* or *nə-* serves as a verb-dependent orientationally matching perfectivizer, it is the centripetal or centrifugal meaning that the prefix and the verb have in common.<sup>11</sup> Therefore, predicates requiring *ko-* ‘east’ as the perfective prefix, like *kɛ-sɛjtân* ‘to accumulate (vt.)’, *kɛ-nəpjêm* ‘to warm oneself by the fire’, and *kɛ-ktfêr* ‘to squeeze’, inherently denote ‘toward center’. Likewise, predicates with *nə-* ‘west’ as their orientationally matching perfectivizer inherently denote ‘away from center’. Examples from this category include *kɛ-prêt* ‘to break (e.g. a string) (vt.)’, *ka-ŋi* ‘to die’, *ka-ldzî* ‘to peel’, and *kɛ-lêt* ‘to release’.

For the other non-motion verbs, the selection of the perfectivizer appears to be conventionalized. One can no longer discern the orientational motivation from the lexical semantics of the predicates involved.

In this section, I have shown that the perfective verb form is constructed via the same strategy in the three rGyalrong languages: orientation prefix + STEM2, with the selection of the perfectivizer for a specific verb being largely lexically specified. The following section presents the three major functions conveyed by the perfective verb form in rGyalrong.

### 3.2 Primary functions of the perfective verb in rGyalrong

Three major functions are associated with the perfective verb form: (a) to denote a single, unified, discrete situation, (b) to signal a change of state, (c) to refer to a past situation as related to the present. The difference between the first two functions

9. Tonality is contrastive in Caodeng (J. Sun 2007b) and Zhuokeji (YJ Lin 2009). Suprasegmental symbols used in this paper are:  $\hat{\sigma}$  (syllable with falling tone) and  $\acute{\sigma}$  (accented syllable).

10. Nagano (1984: 32–33) notes a similar phenomenon concerning the selection of *to-* ‘up’ and *na-* ‘down’ as verb-dependent perfective prefixes.

11. XR Lin (1993: 228–231) also detects a centripetal-centrifugal contrast encoded by *ko-* and *nə-*; but he suggests that the contrast was extended from the upstream-downstream opposition.

reflects the semantic distinction between dynamic and stative predicates. The third usage is an extended function of the perfective verb form, which is widely attested crosslinguistically.

### 3.2.1 *Perfective on dynamic verbs: Single, unified, discrete situation*

A perfective verb typically presents a situation as having temporal boundaries (Comrie 1976, Dahl 1985, Bybee et al. 1994). It presents “the view of a situation as a single whole, without distinction of the various separate phases that make up the situation” (Comrie 1976: 16). In rGyalrong, when formed with a dynamic verb, the perfective form signifies that a situation is terminated or completed. Consider this example from Caodeng.

- (3) Caodeng (J. Sun 2003: 499 (21))

*kəkəʔ qa te-<sup>n</sup>di q<sup>h</sup>oʔ*  
 3SG hoe PFV:up-carry<sub>2</sub> LINK  
*komʔ te-cu q<sup>h</sup>oʔ*  
 door PFV-open<sub>2</sub> LINK  
*təjtʃe-nəŋ kə-remə jə-ʃeʔ*  
 field-in PURP-do.labor PFV-go<sub>2</sub>

“He picked up the hoe, opened the door, and went off to do labor in the field.”

The example above illustrates events in discrete sequence; the event of each non-final verb is terminated before the onset of the event of the following verb. Such perfective verbs are not compatible with adverbials of imperfective (progressive or habitual) meanings, such as ‘often’ or ‘usually’.

### 3.2.2 *Perfective on stative verbs: Change of state*

At the predicate level, when applied with states, the perfective morpheme signals a complete change of state (Chung & Timberlake 1985: 217). The beginning or end of a state is dynamic, so the combination of perfectivity and stativity can only refer to the inception and termination of the states (Comrie 1976: 50–51). In fact, it has been observed that languages that have a morphological category to indicate perfectivity for processes often apply the grammatical morpheme to signal inception of a state (Chung & Timberlake 1985: 217, Comrie, 1976: 19). The Dazang examples below contrast the perfective form and bare stem of the same stative verb. In these cases, the perfective form (4a) signals the inception of a state, while the bare stem (4b) denotes a continuous state in the present.

- (4) Dazang

a. *jəʂni tə-ci nə-məʃtaχ*  
 today N-water PFV-be.cold  
 “The water turned cold today.”

- b. *jəsni tə-ci məstaχ*  
 today N-water be.cold:NPST  
 “The water is cold today.”

### 3.2.3 Perfect (Retrospective, Anterior) viewpoint

Smith (1991: 140–145) defines perfects in terms of temporal references and temporal location, using Reichenbach’s three temporal indices: Speech Time, Reference Time (temporal standpoint of a sentence) and Situation Time (an interval of time in which a specific situation occurs) (1947: §51). The perfect viewpoint is one in which Situation Time precedes Reference Time, which may precede, follow, or coincide with Speech Time.

Like Russian (Dahl 1985: 63), Caodeng (J. Sun, 2003: 496–497), Zhuokeji and Dazang have no distinct perfect forms, but perfect meaning can be inferred from context for certain occurrences of verbs in the perfective. Example (5) shows how the perfective form indicates a retrospective viewpoint. In this case, Situation Time precedes Reference Time, which is simultaneous with Speech Time (now).

- (5) Zhuokeji  
*ŋa təwê ko-ltíp-ŋ*  
 1SG clothes PFV-fold<sub>2</sub>-1SG  
 (Child to Father) “I have folded the clothes.” (Can I go play now?)

As shown above, it is in conjunction with the contextual question (“Can I go play now?”) that the perfective verb creates for the past events a relevance to the present moment. In this context, the present state that the clothes are folded is referred to by means of the perfective verb *ko-ltíp-ŋ* (PFV-fold<sub>2</sub>-1SG) as the result of the child’s action of folding clothes in the past. Such situations in which a present state holds as a result of a past action is termed ‘perfect of result’ by Comrie (1976), and was referred to as “one of the clearest manifestations of the present relevance of a past situation” (Comrie 1976: 56).

To sum up, the rGyalrong perfective is formed with an orientation prefix plus STEM2. The selection of the perfectivizer for non-motion verbs is lexically determined. When formed with a dynamic verb, the perfective verb describes a single, unified, discrete situation; while with a stative verb, the perfective verb signals a change of state. rGyalrong does not have a distinct category of perfect, yet perfect meaning coded in a perfective verb can be understood from context.



## 4. Past Imperfective

### 4.1 Formation of the past imperfective in rGyalrong

While all six orientation prefixes can serve as perfectivizers to a specific verb, there is only one past imperfective prefix in rGyalrong. In the three languages, the forms are:

Languages	Past imperfective prefix
Caodeng	<i>nv-</i>
Dazang	<i>pə-</i>
Zhuokeji	<i>na-</i>

The prefix is attached to STEM2 in the formation of the past imperfective verb. In Caodeng and Zhuokeji, the past imperfective verb forms are formed with both dynamic and stative verbs. As illustrated in the following examples from the two languages, the verbs “to be like, to resemble” (6a) and “to be fat” (7a) are stative, while the verbs “to drink” (6b) and “to cry” (7b) are dynamic. These verbs can all occur with the past imperfective prefix to denote a continuous situation in the past.

(6) Caodeng: Past imperfective verb forms

a. Stative

*c<sup>h</sup>eɪ=z*                      *é-pe*                      *nv-fsât-an*  
 former.time=LOC 1SG:POSS-father IPFV:PST-be.like<sub>2</sub>-1SG  
 “I used to look like my father.”

b. Dynamic

*forɪ*                      *kəkɔɪ jə-weɪ*                      *orjányəz, ɛʃiɪ tʃeɪ nv-t<sup>h</sup>i-an*  
 yesterday 3SG PFV-come<sub>2</sub> when 1SG tea IPFV:PST-drink<sub>2</sub>-1SG  
 “Yesterday when he came, I was drinking tea.”

(7) Zhuokeji: Past imperfective verb forms

a. Stative

*ŋa kəscəj*                      *na-ts<sup>h</sup>ô-ŋ*  
 1SG in.the.past IPFV:PST-be.fat<sub>2</sub>-1SG  
 “I used to be fat.”

b. Dynamic

*wəjo na-ŋakrû-s*  
 3SG IPFV:PST-cry<sub>2</sub>-PST  
 “He was crying.”

While in Caodeng and Zhuokeji the past imperfective verb form is compatible with both dynamic and stative verbs, in Dazang, the past imperfective is attested only with stative or copular verbs, for example:

- (8) Past imperfective in Dazang  
*jɪʒo kaʒipəci kəvde pə-ktʃi-ji kəʀəŋ,*  
 1PL sibling four IPFV:PST-be.small-1PL SUB  
*ŋa stu pə-kʰe-a*  
 1SG SUP IPFV:PST-be.stupid-1SG  
 “When we four siblings were small, I was the stupidest one.”
- (9) Past imperfective in Dazang  
*a-wi=nu tərme kaʃki ka-frtən*  
 1SG:POSS-grandmother=TOPZ person DAT NM-be.sincere  
*tɛ=kə tə-rme pə-ŋu*  
 one=GEN N-person IPFV:PST-COP  
 “My grandmother was a person who was sincere to people.”

Both (8) and (9) represent states (“to be small” and “to be stupid” in (8), and “to be a sincere person” in (9)) that were in effect in the past.

If one tries to attach the Dazang past imperfective *pə-* to dynamic verbs, no past imperfective reading results. Instead, one may come up with one of three situations. First, the dynamic verb is a non-motion verb that happens to require the ‘down’ prefix *pə-* (which is phonologically identical to the past imperfective *pə-*) as its orientationally opaque or orientationally matching perfectivizer. Instead of being a predicate that can be ambiguously interpreted as either perfective or past imperfective, the verb form can only convey perfectivity. The second possibility is that the dynamic verb is a motion verb; when prefixed with *pə-* it forms a perfective verb that fully specifies the orientation meaning “down”.

- (10) Dazang  
*mi pə-rɔ*  
 3SG PFV:down-run  
 “He ran down.”

Again, here a past imperfective reading is never acceptable. Further evidence for this claim is this: when the verb is combined with a temporal adverbial that is prototypical for habituality, it results in ungrammaticality, as illustrated (11).<sup>12</sup>

- (11) Dazang  
*mi \*sɲikuku pə-rɔ*  
 3SG every.day PFV:down-run

12. See §4.2.2 for habitual in the past as encoded by the Past Imperfective in Caodeng and Zhuokeji.

The other possible situation is that the dynamic verb is not a motion verb, nor does it ‘down’ as its default prefix. If one still attaches the prefix *pə-* to such a dynamic verb, the outcome does not make sense at all.

Note that, although the past imperfective *pə-* is restricted to stative verbs in Dazang,<sup>13</sup> it is more appropriate to categorize it as a past imperfective marker rather than as a past marker, the latter of which is grammatically more general than the former. The most crucial reason is that the past imperfective *pə-* is not compatible with perfective predicates, which in most cases also locate situations in the past. In fact, though restricted to stative verbs in Dazang, the past imperfective verb form still contrasts with the perfective.

(12) Dazang

a. Past imperfective

*joŋ jiʒo ji-sətʰa tə-rti nə-wə-χtʃi tʃe*  
 in.the.past 1PL 1PL:POSS-place N-gunny.sack IPFV-GP-wash SUB  
*ʃkres=kə sqʰetɛlɛyi(=γə) nə-wə-sɐ-χtʃi tʃe*  
 oak=GEN cinder=INTR IPFV-GP-CAUS-wash SUB  
*ŋoma pə-pe.*

very IPFV:PST-be.good

“In the past, at our place, when we washed gunny sacks, we washed them with cinders from oak, it was very good.”

b. Perfective

*nəstʃe joŋ sənɐ kəχo tɐ-pe*  
 now in.the.past CPTV very PFV-be.good

“Now it has become better than before.”

The same stative verb *kə-pe* ‘to be good’ occurs in both (12a) and (12b). The past imperfective form *pə-pe* (IPFV:PST-be.good) in (12a) presents a state in the past. The sentence in (12b) is taken from a passage about how the food supply has improved in the Chabao area. The verb form *tɐ-pe* (PFV-be.good) denotes a change of state.

#### 4.2 Functions of the past imperfective in rGyalrong

The past imperfective form codes both tense (past) and aspectual (imperfective) information. In aspectual terms, the past imperfective is used in progressive and habitual contexts (in Caodeng and Zhuokeji), as well as to contrast a perfective viewpoint (in all three languages), as detailed below.

13. A reviewer indicates that in another dialect of Chabao/Japhug rGyalrong (Kymjuu/Ganmuniao) (Jacques 2004: 375), the past imperfective prefix can appear with dynamic verbs in a special context: counterfactual conditional. Nevertheless, in Dazang, combination of the past imperfective with dynamic verbs is not found.

In terms of tense, the past imperfective is restricted to the past. In all three languages, the past imperfective verb form cannot carry present time reference. Examples (13–15) show past imperfective verb forms occurring with a present time adverbial “now” (*pəʃkʰo* in Caodeng, *tʰamtʰam* in Dazang, and *pi* in Zhuokeji), and none of them is acceptable.

## (13) Caodeng

(*forʔ/\*pəʃkʰo*) *qɛʃiʔ nɛ-χtuʔ-aj*  
 yesterday/now sheep IPFV:PST-buy<sub>2</sub>-1SG  
 “(Yesterday/\*Now) I was buying sheep.”

## (14) Dazang

(\**tʰamtʰam*) *tə-ci pə-məʃtaχ*  
 now N-water IPFV:PST-be.cold  
 “(\*Now) the water was cold.”

## (15) Zhuokeji

*ŋə-tʃê* (\**pi*) *stɔŋsnɪ təmɲok na-za-w*  
 1SG:POSS-younger.brother now every.day bread IPFV:PST-eat<sub>2</sub>-OBJ  
 “My younger brother (\*now) used to eat bread every day.”

Four functions encoded by the past imperfective verb have been observed in all or some of the three rGyalrong languages: (a) ongoing event in the past; (b) habitual event in the past; (c) state in the past; (d) perfect of a persistent situation. The following subsections examine each of these categories.

4.2.1 *Ongoing event in the past*

In both Caodeng and Zhuokeji, when used with dynamic verbs, the past imperfective describes ongoing events in the past. However, its meaning varies according to what situation type the verb denotes. In other words, the progressive does not focus on part of the interval for all situation types. Consider the following Zhuokeji examples:

## (16) Zhuokeji

- |    |  |                                 |
|----|--|---------------------------------|
| a. | <i>wəʃo na-ŋakrû-s</i>                           | “He was crying.”                |
|    | 3SG IPFV:PST-crying <sub>2</sub> -PST            | (Activity)                      |
| b. | <i>ŋa tarmok na-rkôs-ŋ</i>                       | “I was carving a dragon.”       |
|    | 1SG dragon IPFV:PST-carve <sub>2</sub> -1SG      | (Accomplishment)                |
| c. | <i>wəʃo wəti na-mdu</i>                          | “He was about to arrive there.” |
|    | 1SG there IPFV:PST-come <sub>2</sub>             | (Achievement)                   |
| d. | <i>wəʃo wə-rtsʰos nɛ-pê-w</i>                    | “He was coughing.”              |
|    | 3SG 3SG:POSS-cough IPFV:PST-do <sub>2</sub> -OBJ | (Semelfactive)                  |

For activity (16a) and accomplishment (16b), duration is naturally entailed, and it is indeed the interval of the situation that the progressive reading refers to. However, achievements (16c) and semelfactives (16d) are instantaneous, thus duration is generally not possible for them. Achievements are telic (with a natural endpoint), resulting in a change of state; therefore, with achievements, imperfective viewpoint normally focuses on the preliminary stages to the event, which are detachable and take place prior to the change of state (Smith 1991: 58–63). Consider (16c). In this example, the participant in the event was just approaching the intended destination point. Finally, with semelfactives, it is not internal stages, but an iterative interpretation that is conveyed (Comrie 1976: 42); hence, the progressive in (16d) does not indicate one single cough, but repeated actions of coughing.

#### 4.2.2 *Habitual in the past*

Habituals typically describe “a situation which is characteristic of an extended period of time” (Comrie 1976: 27–28). In many cases, habitual situations are compatible with adverbials that mean “usually” (Dahl 1985: 97). The Caodeng example in (17), with the verb “to drink” in the past imperfective form, indicates that drinking liquor was something the speaker did regularly in the past:

- (17) Caodeng  
*c<sup>h</sup>es?*      *era?*      *nɐ-t<sup>h</sup>i-an*  
 in.the.past liquor IPFV:PST-drink<sub>2</sub>-1SG  
 “I used to drink liquor before.”

The Zhuokeji example below shows the past imperfective verb *na-za-w* (IPFV:PST-eat<sub>2</sub>-OBJ) collocating with adverbials denoting both a past context (*kəscêj* “in the past”) and habituality (*stoŋsnî* “every day”).

- (18) Zhuokeji  
*ŋə-tfê*                      *kəscêj*      *stoŋsnî*      *təmŋok na-za-w*  
 1SG:POSS-younger brother in.the.past every.day bread IPFV:PST-eat<sub>2</sub>-OBJ  
 “My younger brother used to eat bread every day.”

#### 4.2.3 *State in the past*

When formed with stative verbs, past imperfective verb forms signify states that held at a past time point or interval. The following Zhuokeji examples demonstrate the contrast between past and present states as expressed respectively via the past imperfective verb form (19a) and bare STEM1 (19b) of the same stative verb.

## (19) Zhuokeji

- a. *wətə wə-tʃim na-kəkəte-s*  
 that 3SG:POSS-house IPFV:PST-be.big<sub>2</sub>-PST  
 [Talking about the house in which the speaker used to live but which  
 has now been torn down] “The house used to be big.” (based on Dahl  
 1985: TAM Questionnaire B, #3)
- b. *ŋa kə-ŋi-ŋ wə-tʃim kəkətê*  
 1SG NMLZ-live<sub>1</sub>-1SG 3SG:POSS-house be.big<sub>1</sub>:NPST  
 “The house I live in is big.”

4.2.4 *Perfect of persistent situation*

While habitual and continuous readings of past imperfective are commonplace in the world’s languages, there is one use of past imperfective observed in Zhuokeji that appears to be quite rare crosslinguistically. This is the use of the past imperfective to denote a perfect of persistent situation.

A perfect of persistent situation, according to Comrie, is “a situation that started in the past but continues (persists) in the present” (1976:60). An example is found in the English expression *I’ve been waiting for hours*. Among the languages of the world and even within rGyalrong, such situations are found to be expressed by the perfect (as in English), by the present tense (as in French and Russian), or by the perfective (as in Dazang). Nonetheless, in Zhuokeji, it is the past imperfective that is utilized for perfect of persistent situations. This somewhat surprising observation can be verified by the following example.

## (20) Zhuokeji: Perfect of persistent situation

- wəjo tə-saksəŋk<sup>h</sup>û na-nəza-s,*  
 3SG one(whole)-afternoon IPFV:PST-dine<sub>2</sub>-PST  
*wədzəs mə-tə-nəzâ-n to-tsə-n*  
 no.more NEG:IMP-2-dine<sub>1</sub>-2SG IMP-say<sub>1</sub>-2SG  
 “He has been eating the whole afternoon. Tell him not to eat any more.”

In this example, the event of dining (represented by the past imperfective gram) starts before Speech Time and is still in progress at the moment when the utterance is produced.

Although unusual from typological perspectives, use of the past imperfective to denote an ongoing action is far from being impossible. As noted by Comrie (1985:41–43), past tense simply indicates that the situation in question is located prior to the present moment, but it does not make explicit whether the situation terminates at some point in the past, or carries on to the present or to the future. There is often a conversational implicature that the situation does not hold at the present, but the implicature can easily be cancelled by context. For example, a

sentence like *John was eating lunch (when I looked into his room)* says nothing about whether John is still eating lunch or not (Comrie 1985: 42).

In light of the observation that the past imperfective may be attached to an action which continues into the present, the past imperfective could be used to index a situation that begins at some point in the past, but extends in duration until at least the present moment. In fact, the Zhuokeji past imperfective operates in exactly this manner.

In the previous and current sections, I have illustrated in considerable detail the formation and function of the perfective and past imperfective verbs in rGyalrong. Armed with the knowledge of how these grammatical categories operate, we can now examine whether the past imperfective prefix really has derived from the same source as the perfective prefix ‘down’.

### 5. Past imperfective and perfective ‘down’: Homonymy or polysemy?

In the examples presented thus far, one could have noticed that the past imperfective prefix is identical to the ‘down’ perfectivizer in all the three rGyalrong languages. The isomorphism is shown in Table 2:

Table 2. The past imperfective prefix and ‘down’ perfectivizer in Caodeng, Dazang, and Zhuokeji

Lgs	Prefixes	Past imperfective	‘down’ perfectivizer
Caodeng		<i>nv-</i>	<i>nv-</i>
Dazang		<i>pə-</i>	<i>pə-</i>
Zhuokeji		<i>na-</i>	<i>na-</i>

As seen, while rGyalrong has six orientation prefixes that can serve as perfectivizers (§3.1), it has only one past imperfective marker (§4.1). The scenario is partially laid out in the following Dazang example. The verb “to be beautiful” in (21a) takes *tv-* “up” as its orientationally opaque perfectivizer, while the verb “to be cold” in (21b) requires *nə-* “west” as its perfectivizer.

(21) Dazang: Perfective

- a. *lamu tv-mp<sup>h</sup>jer*  
Lamu(PN) PFV-be.beautiful  
“Lamu became beautiful.”
- b. *jəsnɪ tə-ci nə-məstax*  
today N-water PFV-be.cold  
“The water turned cold today.”

However, in past imperfective contexts, both “to be beautiful” and “to be cold” take the prefix *pə-*.

- (22) Dazang: Past Imperfective
- a. *lamu pə-mp<sup>h</sup>jər*  
Lamu(PN) IPFV:PST-be.beautiful  
“Lamu was beautiful.”
  - b. *tə-ci pə-məftaχ*  
N-water IPFV:PST-be.cold  
“The water was cold.”

Given this isomorphism, it is natural to wonder whether rGyalrong makes any structural distinction between a perfective verb form prefixed with ‘down’ from its past-imperfective counterpart. In fact, the two are ambiguous. Consider the Zhuokeji examples in (23).

- (23) Zhuokeji
- wəjo ηə-jê=j smôn na-mâr*  
3SG 1SG-side=LOC medicine PFV-smear
- a. Perfective: “He applied medicine on me.”
  - b. Past imperfective: “He was applying medicine on me.”

The verb *ka-mâr* “to smear” requires *na-* “down” as its default perfectivizer, thus its perfective verb form (*na-mâr*) is phonologically identical to its past imperfective counterpart. For ambiguous cases like this, one can only rely on context to figure out which denotes perfectivity, and which codes past imperfective meanings.

Now that the isomorphism between perfective ‘down’ and past imperfective is confirmed, the next question would be where this homophony comes from. That is, can this similarity in form between perfective ‘down’ and the past imperfective prefix be dismissed as accidental, or does it actually represent one and the same etymon? What should be noted again is that the isomorphism, however rare, recurs in all these distinct rGyalrong languages. The ‘down’-perfective/past imperfective *pə-* in Dazang even seems to have undergone lexical replacement when compared with the other two languages, in which the forms (Caodeng *nə-*; Zhuokeji *na-*) appear to be cognate. Even so, Dazang demonstrates the same homophony as the other two languages. This fact suggests that the isomorphism is not likely to be a historical accident.

Stronger evidence for virtual identity between perfective ‘down’ and the past imperfective prefix comes from Dazang morphology, which shows that the two categories behave in exactly the same way with a third category, the indirect evidential.



Let us start by looking at how indirect evidential meaning is expressed with the perfective in Dazang. The perfective employs, among other inflectional devices, prefix suppletion in the formation of its indirect evidential form. Table 3 shows the two sets of orientation/perfective prefixes which appear respectively in modally unmarked and indirect evidential verb forms.

**Table 3.** Orientation/perfective prefixes for modally unmarked and indirect evidential perfective verb forms in Dazang

	Up	Down	East	West	Upstream	Downstream
Modally unmarked	<i>tɐ-</i>	<i>pɔ-</i>	<i>kɐ-</i>	<i>nɔ-</i>	<i>lɐ-</i>	<i>tʰɔ</i>
Used with indirect evidential	<i>tu-</i>	<i>cɔ-</i>	<i>ku-</i>	<i>ɲɔ-</i>	<i>lu-</i>	<i>cʰɔ-</i>

The indirect evidential set of orientation prefixes comes with another indirect evidential prefix *a-*. Together they attach to STEM1 in the formation of the indirect evidential perfective verb. The verb is used to signal that the perfective situation that a speaker is relating was not witnessed or perceived directly by him/her. The examples below contrast the modally unmarked and indirect evidential forms of a perfective verb. The example in (24) illustrates a verb composed of a modally unmarked perfective *nɔ-* ‘west’ plus STEM2. The sentence is typically uttered by a person who has seen Lamu going westward.

- (24) Dazang: Modally unmarked perfective

*l̩amu nɔ-tʰɛl*  
 Lamu(PN) PFV:west-go<sub>2</sub>  
 ‘Lamu went westward.’ (I saw it.)

On the other hand, if the speaker learns the fact that Lamu went westward as second-hand information (either through hearsay or inference), it is *ɲɔ-*, the indirect evidential prefix meaning ‘west’, that works in conjunction with the other indirect evidential prefix *a-* plus STEM1 to form the indirect evidential perfective verb.

- (25) Dazang: Indirect evidential perfective

*l̩amu ɲɔ-a-fe*  
 Lamu(PN) EVI:PFV:west-EVI-go<sub>1</sub>  
 ‘Lamu went westward.’ (I learned about this after she was gone.)

The same variation occurs for prefixes that mean ‘down’. If a perfective verb prefixed with ‘down’ is to convey an indirect evidential situation, the modally unmarked *pɔ-* ‘down’ has to be supplanted by *cɔ-* in the indirect evidential form. Consider the minimally contrasting pair of sentences below. Example (26a) demonstrates a modally unmarked perfective form prefixed with *pɔ-*. The sentence in (26b) is only different from (26a) in evidentiality, and by the *cɔ-a-* prefix.

## (26) Dazang

## a. Modally unmarked

*ʋdurzi tʰəɣar=tsu kə-nəci pə-ye*

Duoji(PN) riverside=LOC NMLZ-drink.water **PFV:down**-come<sub>2</sub>

“Duoji went down to drink water at the riverside.” (I saw him do it.)

## b. Indirect evidential

*ʋdurzi tʰəɣar=tsu kə-nəci cə-a-yi*

Duoji(PN) riverside=LOC NMLZ-drink.water **EVI:PFV:down-EVI**-come<sub>1</sub>

“Duoji went down to drink water at the riverside.”

(I learned about this indirectly.)

The Dazang past imperfective also inflects for evidentiality. The indirect evidential counterpart to the modally unmarked past imperfective *pə-* is exactly *cə-a-*, the form that also represents the indirect evidential perfective for ‘down’. Consider the following examples. The predicate in (27) refers to a past situation in which the speaker herself was involved, thus a modally unmarked past imperfective form is an apt choice.

## (27) Dazang: Modally unmarked past imperfective

*nə kəɾəŋ jiʒo tʰəpʰu setʰa rgergen jə-ŋgu=s*

that time 1PL PLN place teacher 1PL:POSS-inside=LOC

*ŋa=yə kə-znəmdoχ tsa pə-ŋu-a*

1SG=TOPZ NMLZ-be.outstanding little **IPFV:PST-COP**-1SG

“At that time, among the teachers in Chabao area, I was quite outstanding.”

The example in (28) is a fragment of a folk story, a genre in which the use of indirect evidential marking is the norm. Notice that the past imperfective verb inflects for evidentiality in exactly the same way as the perfective verb prefixed with ‘down’ ((26b) above).

## (28) Dazang: Indirect evidential past imperfective

*takukutakuku=tsu tə-rme ju cə-a-tu,*

long.time.ago=LOC N-person two **EVI:IPFV:PST-EVI**-there.be

*tə-rdoχ nu kəpʰu cə-a-ŋu,*

one-CLF TOPZ beggar **EVI:IPFV:PST-EVI-COP**

*tə-rdoχ nu tsʰoŋwapa cə-a-ŋu*

one-CLF TOPZ merchant **EVI:IPFV:PST-EVI-COP**

“Once upon a time, there were two men. One was a beggar, one was a merchant.”

The inflectional similarity demonstrated in the perfective and past imperfective forms for evidentiality is summarized in the following table. Among the six perfectivizers, the ‘down’ prefix is bolded for visual clarity.

**Table 4.** Inflectional similarity between Dazang perfective and past imperfective form for evidentiality

	Perfective		Past Imperfective
Modally Unmarked	“up” <i>tɛ-</i>	+ STEM2	
	“down” <i>pɔ-</i>		<i>pɔ-</i> + STEM2
	“east” <i>kɛ-</i>		
	“west” <i>nɔ-</i>		
	“upstream” <i>lɛ-</i>		
	“downstream” <i>tʰɔ-</i>		
Indirect Evidential	“up” <i>tu-a-</i>	+ STEM1	
	“down” <i>cɔ-a-</i>		<i>cɔ-a-</i> + STEM1
	“east” <i>ku-a-</i>		
	“west” <i>ɲɔ-a-</i>		
	“upstream” <i>lu-a-</i>		
	“downstream” <i>cʰɔ-a-</i>		

These morphological facts in Dazang all suggest that in rGyalrong the perfective verb with ‘down’ and the past imperfective verb are not accidentally identical in form. Their morphological behaviors show that the two categories are actually represented by one single form. This, together with the recurrence of this relatedness throughout rGyalrong languages and other rGyalrongic languages,<sup>14</sup> provide evidence that the perfective ‘down’ and the past imperfective prefix are polysemous rather than homophonous.

## 6. ‘down’: Perfectivity and continuity

Thus far, we have seen morphological and comparative evidence that strongly suggests a polysemous relationship between the ‘down’ perfective and the past imperfective in the rGyalrong language. What remains to be determined is the semantic relationship that could underlie the polysemy in question.

As shown in the previous sections, while many languages apply forms expressing local or similar meanings as “bounders” (Bybee & Dahl, 1989: 85–86), rGyalrong presents an exception by using an orientation prefix meaning ‘down’ to encode, in addition to perfectivity, past imperfectivity. The rGyalrong case seems to suggest that there should be some semantic sense of continuity inherent in the

14. Lavrung and Horpa in the rGyalrongic subgroup are also noted to exhibit polysemous relations between ‘down’ and past imperfective formatives (Jackson T.-S. Sun, p.c.).

meaning of ‘down’ to make it at least eligible for coding imperfectivity. Independent evidence that continuity is a semantic component of ‘down’ in rGyalrong is found in a special imperative verb form in Caodeng. But before we look into it, let us take a very brief look at how the imperative is generally formed and used in rGyalrong.

By means of the imperative, the speaker commands the addressee to actualize the action (Chung & Timberlake 1985: 248). In rGyalrong, the imperative structure is composed of an orientation prefix plus STEM1 or STEM3 (The latter occurs with irregular transitive verbs that show three stem forms (Jackson T.-S Sun, p.c.)). The selection of the orientation prefix for the imperative form of a verb works in exactly the same way as it does for perfective forms. Consider the following examples from the three languages. Each example shows the imperative form (29a, 30a, 31a) carrying exactly the same orientation prefix as its perfective counterpart (29b, 30b, 31b).

## (29) Caodeng

- a. *tʃóχtse-ta pʰərtʃu kə-te nəʔ tə-mjə*  
 table-on bowl NMLZ:GP-put<sub>2</sub> SUB IMP:up-take<sub>3</sub>  
 “Pick up the bowl that has been put on the table.”  
 (J. Sun 2003: 501 (29))
- b. *qʰənəʔ-kə ʃkótse-cə te-mjəʔ-cə*  
 ANA-ERG stone-INDF PFV:up-take<sub>2</sub>-MED  
 “He picked up a stone ...”

## (30) Dazang

- a. *ŋa ta-fi tʰə-rŋu-z-a*  
 1SG N-Tibetan.barley PFV-parch-PST-1SG  
 “I parched the Tibetan barley.”
- b. *ta-fi tʰə-rŋu*  
 N-Tibetan.barley IMP-parch  
 “Parch the Tibetan barley!”

## (31) Zhuokeji

- a. *tə-mjok to-zâ-ŋ*  
 N-bread PFV-eat<sub>2</sub>-1SG  
 “I ate the bread.”
- b. *pi ʃtə wə-tə-mjok to-zə-w*  
 now this 3SG:POSS-N-bread IMP-eat<sub>1</sub>-OBJ  
 “Eat this bread now!”

In Caodeng, however, the uses of *nəʔ*- ‘down’ are not restricted to ordinary perfective and imperative verb forms that can take ‘down’. In fact, the other use of this prefix is much more general in the sense that it can co-occur with STEM1

of all verbs. As exemplified in (32), the prefix *nv-* “down” is used to command the addressee to continue to do something. “To eat” in Caodeng lexically requires *tə-* “up” as its default perfective/imperative prefix, but in this example of durative imperative, the verb is prefixed by *nv-* “down”.

- (32) Caodeng  
*kəc<sup>h</sup>iɿ nv-ndzɐ*  
 sweets IMP:DUR-eat<sub>3</sub>  
 “Just keep eating your candy!”

The existence of a durative sense in ‘down’ is also attested in another member of the Sino-Tibetan family: Mandarin Chinese (Jackson T.-S. Sun, p.c.). In this language, *xia-qu* “descent-go = down away from the speaker” means “continue” if used with a non-displacement verb (Li & Thompson 1981: 61–62). The verb compound can be used in many contexts, including imperative (33), conditional (34), and future (35). Note that in these examples, *xia-qu* does not mean “descent-go” but encodes continuity.

- (33) Mandarin: Imperative context  
*shuo-xiaqu*  
 say-go.down  
 “Keep talking!”
- (34) Mandarin: Conditional context  
*ruguo ni dai-xiaqu, keneng hui you jihui*  
 if 2SG stay-go.down maybe FUT have chance  
 “If you keep staying, you may get a chance.”
- (35) Mandarin: Future context  
*wo hui yizhi bang-xiaqu*  
 I SG FUT always help-go.down  
 “I will keep helping always.”

Our conceptualization of the up/down axis is generally based upon our experience with the direction of the pull of gravity (Fillmore 1982: 36–37). One may therefore infer on pragmatic grounds that while moving down, one is more likely to stay in some kind of steady and persistent situation than in moving upward. This is because in doing the latter one has to use much more energy to work against the force of gravity as well as to move forward. This inference is extendable to non-locomotion activities. For example, if some task is common or habitual, the doer is likely to be familiar with its requisite procedures and skills. Thus, to continue a task is easier than to switch to a new task, for which a different set of knowledge and skills would be required.

Therefore, the fact that ‘down’ in rGyalrong can encode both perfectivity and continuity is consistent with metaphorical extensions of verticality. This enantiodromia is licensed by the fact that a concept may enter into our experience in many different ways (Lakoff & Johnson 1980: 19). In metaphorical extension, the mapping between source and target concepts is partial in nature, and a specific source concept can characterize more than one target domain (Kövecses 2002: 108).

Following this line of thinking, I suggest that rGyalrong selected two of the aspects of the source domain DOWN, and extended them to two distinct target domains. As illustrated below, in target domain (a), it is the endpoint in the meaning of ‘down’ that is highlighted; while in target domain (b), the meaning of “staying in the same situation” is brought into focus, and the endpoint is not referenced:

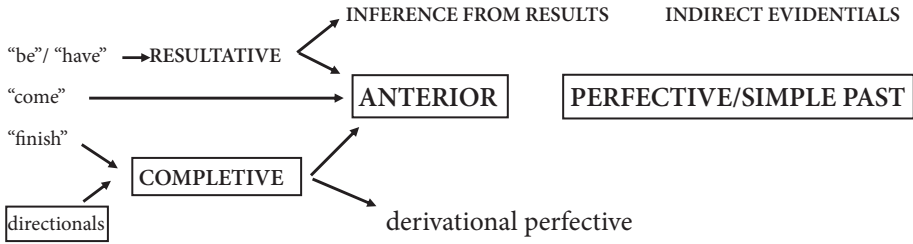
- a. DOWN is ‘to the limit’: DOWN functions as a bounder, and makes the predicate telic  
Physical basis: People typically move toward a specific orientation with a specific destination to reach
- b. DOWN is continuity: Moving DOWN is to stay in a steady and persistent situation  
Physical basis: While moving down, one is more likely to stay in some kind of steady and persistent situation than in moving upward, for doing the latter requires much more energy to work against the force of gravity

With a plausible semantic connection, I now revisit the grammaticalization paths to perfective and simple past proposed by Bybee et al. 1994. In discussing what the rGyalrong data could suggest about possible developmental pathways, I propose new paths to accommodate the developments of one of the inflectional perfective prefixes as well as the past imperfective prefix, both derived from ‘down’.

## 7. Perfective ‘down’ and past imperfective: Developmental pathways

Among the major developmental pathways of tense-aspect categories proposed by Bybee et al. (1994), directionals have been observed to develop into perfective markers after going through the stages of coding completive and anterior meanings, as shown in the following diagram.

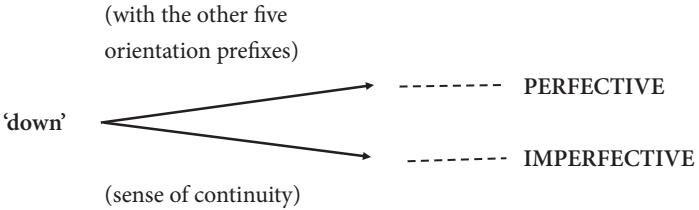
(36) Paths of development from directionals to perfective and simple past grammatical morphemes (adapted from Bybee et al. 1994: Figure 3.1)



This could be the path whereby the six orientation prefixes in rGyalrong evolved to perfectivizers. While with stative verbs they can denote resultative meaning (i.e. that a state exists as a result of an action in the past (Bybee et al. 1994)), with dynamic verbs they may convey completive meaning (i.e. that something is done thoroughly and to completion (Bybee et al. 1994)), and they are indeed employed in perfect (i.e. anterior) contexts (cf. §3.2.3).

However, evidence has shown that in rGyalrong, a specific directional, i.e. ‘down’, in addition to having developed into a perfectivizer, has also grammaticalized to encode past imperfective, a category that is usually regarded as opposite or contrastive to perfective in aspectual terms. It is possible that, once licensed as a grammatical marker, ‘down’ followed two separate paths, leading to a semantic split. On one of the paths, ‘down’, with its potential to code telicity and limit, proceeded together with the other five orientation prefixes to become a perfectivizer. Meanwhile, on the other path, the inherent sense of continuity in ‘down’ helped it evolve to encode imperfectivity. The initial split and the ensuing separate paths are briefly illustrated in the diagram below.

(37) Paths of development from rGyalrong “down” (directional) to two opposite aspectual categories — Perfective and Imperfective



rGyalrong has present and past imperfectives, and a question may arise as to why ‘down’ ended up coding past imperfective instead of present imperfective. One possibility is that the present imperfective markers had already been there when ‘down’ was drawn into the rGyalrong tense-aspect system. In other words, the continuative ‘down’ could have been adopted to form a tense-aspect category

that contrasts in tense with the already-existing present imperfectives (Marianne Mithun, p.c.).

## 8. Conclusion

I have argued for a previously undescribed process of grammaticalization which leads a directional ('down') to follow two distinct developmental pathways: one to a perfective, and the other to an imperfective. It is the inherent senses of continuity and telicity in 'down' that licensed this directional split and developed two grammatical functions that are semantically opposite. The results of such a grammaticalization process are attested in all the reported languages of rGyalrong, thus very possibly is their common heritage from Proto-rGyalrong.

In light of my findings, a further conclusion may be suggested with regard to the well-accepted approach that concentrates on 'major' pathways of diachronic development. Based on rigorous language-sampling methods, many studies have applied this approach to figure out regularities of grammaticalization among genetically and geographically unrelated languages (for example, Bybee et al. 1994, Heine & Kuteva 2002, Dahl 1985). The generalizations achieved by observing recurrent grammaticalization channels have been argued to have explanatory power. This power can be used not only to explain past situations, but even to predict future developments (Heine 1993: 124). The present study, however, demonstrates a developmental process that, although substantiated by appropriate linguistic facts, cannot be accurately accounted for by the 'major' paths. In this process, a directional did not only take the well-travelled path to become a perfective marker, it has also evolved unexpectedly to denote imperfectivity. Given that perfective and imperfective could descend from the same source, the line of demarcation between these most general verbal categories may not be as hard and fast as commonly conceptualized.<sup>15</sup> The approach that relies on this aspectual dichotomy and 'major' paths, therefore, may not be as 'predictive' as one would like to believe.

As pointed out by Campbell, an approach based only on 'common' grammaticalizations "would seem to fail to take into account the great number of very unusual and uncommon grammatical markers which arise through grammaticalizations and the many unusual and unexpected lexical sources which end up

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15. Meanwhile, studies of aspectual categories in Albanian (Joseph forthcoming, esp. fn. 10) and Russian (Dickey 2007: 331) find the dichotomous perfective-imperfective distinction problematic even in analyzing contemporary aspectual systems. In these languages, specific aspectual markers can convey both perfective and imperfective meanings at a time. I am grateful to Brian Joseph for bringing this to my attention.



as grammatical markers encountered in so many languages from all around the world” (2001: 153). While the study of grammaticalization has been shaped primarily by a relatively small number of ‘main’ paths, the approach could present a barrier to the ability of ‘exotic’ but well-substantiated developments to contribute to the study of diachronic changes. In this article, I hope to have shown that tracing down a path less traveled can enhance our understanding of grammaticalization, and thus lead us one step closer to the true nature of language change.

## Abbreviations

(V) <sub>1</sub>	verb stem 1	LINK	linker
(V) <sub>2</sub>	verb stem 2	LOC	locative
(V) <sub>3</sub>	verb stem 3	MED	mediative
1	first person	N	nominal
3	third person	NMLZ	nominalizer
ANA	anaphor	NPST	non-past
CLF	classifier	OBJ	object
CONT	continuous	PFV	perfective
COP	copula	PL	plural
CPTV	comparative	PLN	place name
DAT	dative	PN	personal name
DUR	durative	POSS	possessive
ERG	ergative	PST	past
EVI	indirect evidential	PURP	purposive
FUT	future	RDPL	reduplicative
GEN	genitive	SAP	speech-act participant
GP	generic person	SG	singular
HAB	habitual	SUB	subordinator
IMP	imperative	SUP	superlative
INDF	indefinite	TOPZ	topicalizer
INV	inverse	TR	transitive
IPFV	imperfective		

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## Zusammenfassung

Intensive typologische Forschung zu räumlich-zeitlicher Entwicklung hat gezeigt, dass Richtungsangaben häufig mit „Bounders“ beginnen und schließlich zu Perfekt- oder Präteritum-Markierern grammatikalisiert werden. Inzwischen haben neuere cross-linguistische Studien von Tempus und Aspekt demonstriert, dass eine Opposition zwischen Perfektiven und Imperfektiven der häufigste generelle Kontrast ist, der durch die verbale Morphologie ausgedrückt wird. Diese Arbeit präsentiert ein deutliches Gegenbeispiel zu dieser Annahme. Die rGyalrong-Sprachen zeigen zwar eine Perfektive-Imperfektive Unterscheidung, jedoch werden der Vergangenheit-Imperfekt-Markierer und ein Perfektiv aus demselben Ausgangspunkt entwickelt, nämlich der Richtungsangabe „unten“. Diese Studie dokumentiert eine (bis dato) noch nicht beschriebene Entwicklung, in der sich eine einzelne Richtungsangabe zu zwei entgegengesetzten Aspekt-Kategorien grammatikalisiert hat. Diese unerwartete räumlich-zeitliche Entwicklung zeigt, dass Ansätze der Grammatikalisierungsforschung, die sich lediglich auf die Hauptentwicklungsspur konzentrieren, ergänzt werden müssen.

## Résumé

Des recherches approfondies sur le développement diachronique des marqueurs spatio-temporels ont montré que les morphèmes directionnels ont tendance à commencer comme marqueurs de frontière spatiale ou temporelle, à partir desquels ils finissent par se grammaticaliser comme marqueurs de perfectif ou de passé. Par ailleurs, des travaux sur le temps et l'aspect portant sur un grand nombre de langues ont démontré que l'opposition entre perfectif et imperfectif est celle qui est la plus généralement exprimée par la morphologie verbale. Toutefois, ce travail présente un contre-exemple clair à ces généralisations qui sont pourtant acceptées le plus souvent. En effet, les langues rgyalrong montrent une distinction entre perfectif et imperfectif, mais

le marqueur de passé imparfaitif et un de ceux du perfectif proviennent de la même source : le directionnel ‘vers le bas.’ Cette étude documente donc un développement qui n’avait jamais été mis en évidence auparavant, par lequel un unique directionnel s’est grammaticalisé en deux catégories aspectuelles opposées. Ce développement spatio-temporel inattendu remet en question une approche des études sur la grammaticalisation qui se concentrerait sur quelques « grands » chemins de développement.

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