

Extensive is up, intensive is down: the vertical directional background of the adverbials *ká* vs. *tsá* in Isu¹

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Abstract

Isu, a Cameroonian Grassfields Bantu language of the Ring subgroup, has two highly frequent antonymic adverbials, *ká* vs. *tsá*, which mark a contrast of event extension vs. event intension. Spatial usages of these adverbials suggest that they represent advanced stages of grammaticalisation of prior vertical path verbs *kwóʔ* ‘ascend’ vs. *tswí* ‘descend’ which have evolved as coverbs in the context of asymmetrical serial verb constructions, betraying a metaphorical conceptualisation of qualities and quantities via vertical path schemata, following the models UPWARD IS EXTENSIVE and DOWNWARD IS INTENSIVE. The point of this case study is to provide evidence of – possibly less common – avenues of development of vertical path verbs beyond the spatial domain and thus contribute to the understanding of directionality as a source concept in grammaticalisation.

1. Introduction

Path verbs such as the ones presented in (1a) seem to be widely researched and quite well-known for the paths of grammaticalisation they can take. Many serialising languages of Africa and all over the world attest to their development to spatial grams expressing target concepts such as the ones in (1b) along the lines of desemanticisation, morphosyntactic adjustment and phonetic erosion in the framework of Heine & Reh 1984. Desemanticisation brings about a semantic reduction of path verbs to the paths they encode, i.e. a dedynamicisation. This process entails morpho-syntactic adjustment, i.e. a progre dient loss of verbal properties which might eventually be accompanied by formal erosion, i.e. assimilation and loss of segments or features.

(1) Grammaticalisation of path verbs to spatial grams (in SVCs)

(a) source concept	(b) target concept	reference
‘climb, ascend’ >	UP	(Svorou 1994: 110-113, Heine et al. 1993: 16)
‘descend’ >	DOWN	(Heine & Kuteva 2002: 117, Svorou 1994: 110-113, Heine et al. 1993: 68)
‘enter’ >	IN	(Lord 1993: 147-48)
‘exit’ >	OUT	(Svorou 1994: 115-117)
‘pass’ > ‘exceed’ >	COMPARATIVE	(Heine & Kuteva 2002: 123, 229, Lord 1993: 142-46; Heine 1997: 113)

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The central concern here, however, is not primarily with well-attested developments such as these, but rather with semantic extensions of lexical items for vertical path meanings such as ‘ascend’ and ‘descend’ which go beyond the spatial domain – something which is considerably less researched and will therefore contribute to the understanding of the cognitive potential of directionals in general.

2. The adverbials *ká* vs. *tsá*

Isu² postverbal adverbials *ká* and *tsá* are in antonymic relationship marking a contrast of event extension vs. event intension. While *ká* indicates the spatial or temporal extension of an event resulting in distributive and durative readings, *tsá* rather expresses event concentration and intensification. Thus, in (2a-i) the extensive adverbial *ká* highlights the notion of duration inherent in the core verb *dəm* ‘struggle’, adding the implication that the father’s efforts to teach his son the art of trapping were distributed over a longer period in time and repeated in various places. As soon as *ká* is replaced by *tsá* (2a-ii), the notion of labour inherent in the core verb *dəm* ‘struggle’ is emphasised, implying that the father’s effort to teach his son the art of trapping was concentrated in a single attempt of extraordinary intensity which entails by conventional implication that this intensity, in contrast to the temporally distributed efforts in (2a-i), must be attributed to some unexpected deficiency or abnormal condition, e.g. his son must have been a complete blockhead. In (2b) a drought is described for its slightly different effects: while *ká* (2b-i) indicates that the drought hit extensively, affecting rivers in a vast territory, *tsá* in (2b-ii) rather signalises that the drought hit a more restricted area with a more dramatic effect than in (2b-i): while *ká* in (2b-i) leaves the option that there might be residual puddles of water here and there, however in insufficient quantity, *tsá* in (2b-ii) makes sure that there is absolutely no water left whatsoever.

(2) Postverbal adverbials *ká* (extension) vs. *tsá* (concentration)

(a-i) mwâabé ⁺w-ɔ̄ dəm ká yíy⁺ zúʔí
1.compound.owner 1-D1.P3 struggle EXT until teach

ná tsá ⁺wá á⁺n-í-bè ùffə
keep INT 1.child to-VN-trap 8.things

‘This compound owner struggled for long in repeated attempts to teach his child how to trap things.’

(a-ii) mwâabé ⁺w-ɔ̄ dəm tsá yíy⁺ zúʔí
1.compound.owner 1-D1.P3 struggle INT until teach

ná tsá ⁺wá á⁺n-í-bè ùffə
keep INT 1.child to-VN-trap 8.things

‘This father struggled enormously in an attempt to teach his child how to trap things.’

(b-i) dzwî tǎ ⁺zúmí màa ká
13.rivers 13.P3 become.dry completely EXT

‘All rivers dried up extensively / in a vast area.’

² Isu is a Grassfields Bantu language of the Ring subgroup, spoken by approximately 10,400 people (Lewis 2009) in the North Western province of Cameroon. It is closely related to Aghem spoken mainly in and around the town of Wum (Hyman 1979: ix, Breton & Fohtung 1991: 136-137), in a chain of dialects which include the varieties of Bu (= Laimbue), Weh, Kuk and Zoa (= Zhoa) as well. Kuk is not mentioned in Lewis 2009. Kumfutu and Cha’ mentioned by Watters (2003: 230) could probably be subsumed under Kuk; while Kung, Nyos and Fungom, also mentioned by Watters, seem to belong in Central Ring.

- (b-ii) dzwî tǝ ʔzómí màa tsá
 13.rivers 13.P3 become.dry completely INT
 ‘All rivers dried up completely with no drop left whatsoever.’

The antonymy of *ká* vs. *tsá* may shift from the domain of event dimension to the domain of event number. Thus, *ká* may indicate event plurality or multiplicity, i.e. repeated acts of singing (3a-i) or beating (3a-ii), which results from its primary notion of temporal or spatial extension, whereas *tsá* signalises singularity, i.e. a single act of singing (3b-i) or beating (3b-ii), as a consequence of its primary notion of concentration and intensification.

(3) Contrast of adverbial *ká* (event plurality) vs. *tsá* (singularity)

- (a-i) í ʔzém ká
 5.P3 sing EXT
 ‘It sang repeatedly / extensively.’
- (a-ii) ù bwát ká ʔwé yíyʔ
 3sg beat EXT NS3sg until
 ‘He beat her up for a long time.’
- (b-i) í ʔzém tsá
 5.P3 sing INT
 ‘It sang once.’
- (b-ii) ù bwát tsá ʔwé
 3sg beat INT NS3sg
 ‘He beat her momentarily / once.’

With respect to event number, the adverbials *ká* vs. *tsá* interact with the residues of a system of verbal derivation retained in Isu which includes a verbal pluractional (Kießling 2004b), exemplified by the contrast of a simplex *báb* ‘ask’ vs. the pluractional stem *byíbí* ‘ask repeatedly, inquire’. Thus, the adverbial *tsá* in (4a) highlights the fact that the act of asking has been performed once, albeit insistently. As soon as the verbal simplex *báb* is replaced by the pluractional stem in (4b), the adverbial *tsá* is ruled out, since it is incompatible with the pluractional due to its intensional meaning. However, the pluractional verb stem is perfectly compatible with the adverbial *ká* in (4c) which serves to highlight the repetitive notion here. As mirror image to (4b), the adverbial *ká* is incompatible with the simplex verb *báb* ‘ask’, as indicated in (4d).

(4) Contrast of *tsá* (intension) vs *ká* (extension) in relation to the pluractional

- (a) ú ʔbáb tsá ndàw bàʔtúm
 3sg.P3 ask INT 9.house 1.chief
 ‘He asked once (insistently) for the chief’s house.’
- *(b) ú ʔbyíbí tsá ndàw bàʔtúm
 3sg.P3 ask.pl INT 9.house 1.chief
- (c) ú ʔbyíbí ká ndàw bàʔtúm
 3sg.P3 ask.pl EXT 9.house 1.chief
 ‘He asked repeatedly for the chief’s house.’

*(d) ú ʼbáb ká ndàw bà?túm
 3sg.P3 ask EXT 9.house 1.chief

Apart from this major semantic extension to the domain of event number, both adverbials come up with a variety of specialised meanings which, as will be argued below, stem from the central semantic contrast of extension vs. intension or concentration. In particular, the adverbial *ká* expresses three distinct functions all of which are interrelated by polysemy: a repetitive-distributional function (5a), a completive function (5b) and a continuative-durative function (5c). In (5a), *ká* indicates that the diviners treat the enchanted person with the medicinal shrubs repeatedly. The omission of *ká* would result in the reading that the diviners beat her only once. In (5b), *ká* signals that the maize has been burnt completely: due to the duration of the burning process it has been destroyed entirely. In (5c), *ká* highlights the uninterrupted continuation of an action, i.e. the hares do not let themselves be bothered by the persistent pleas of the hero, but continue being busy with their work for an extended period.

(5) Usages of the adverbial *ká*

(a) repetitive-distributional function:

áyê-fyíná bù fyí kwí tsá ʼwé, bwát ká
2.diviners.P3 come exit catch INT O3sg hit EXT

ʼwé, nè fáká t-íy yíyʼ
O3sg with 13.medicinal.shrubs 13-OF like.this

‘The diviners came out to catch her and kept beating her with medicinal shrubs repeatedly like this.’

(b) completive function:

ásáŋ á ʼfwó nài ká
6.maize 6 burn become.lost EXT

‘The maize got completely burnt.’

(c) continuative-durative function:

ntsì m-ó fâ?-à yè ká ŋwð
6a.hares 6a-D1.P3 work-IPF CFG EXT CF

‘The hares kept working on.’

The adverbial *tsá* has three main functions all of which are interrelated by polysemy: an intensitive function (6a), an immediative function (6b) and an urgentive function (6c). In (6a), *tsá* intensifies the degree of the cobra’s redness, supported by the ideophone *ntsàat* for brightness of a red hue. The elements of immediacy and urgency are illustrated in (6b-c). In (6b), *tsá* indicates an immediate succession of events, used by the narrator to emphasise the deadly effect of the trap: having been caught, the cobra dies inevitably after a short struggle. In (6c), the story’s main protagonist uses *tsá*, in order to make his plea as urgent as possible, implying that immediate action is needed for helping him. This sense of an immediate, acute and punctiliar effect of an action or event expressed by *tsá* is, again, in antonymic contrast to the notion of an extended, spread and distributed effect expressed by its adverbial counterpart *ká*.

(6) Usages of the adverbial *tsá*

(a) intensitive function:

mbám é bàŋ tsá ñtsàat
 9.cobr 9.P3 become.red INT <bright.red>

a

‘The cobra became absolutely red.’

(b) immediacy function:

wìy mbám é bwát kè tǎŋ úwé⁺ pfó dǝʔǝ tsá á⁺wó
 1.wife 9.cobra P3 hit in.vain push 3.body die stay INT there

‘The wife of the cobra fought in vain and died there on the spot.’

(c) urgency function:

má bwóʔ ñiə yà nɛ wó k-íy yà nû
 S1sg clasp give 2pl with 7.hand 7-OF 2pl SJN.hide

ná⁺ tsá⁺ míə
 SJN.keep SJN.INT O1sg

‘Please, I beg you: you should hide me immediately!’

Most of the semantic phenomena observed so far could be explained and motivated by postulating a single basic antonymy of *tsá* vs. *ká*, with *tsá* indicating concentration, intension or an intense effect, whereas *ká* marks a spatially or temporally extensive effect.

Intension in the case of *tsá* includes two distinct tracks of semantic development (7). Taking intensification as the starting point, notions such as punctiliarity, singularity, immediacy and urgency have been derived from it by metonymical steps of extension. Intensification often implies accuracy and usually involves the concentration in a locally and temporally fairly restricted and compact deep impact, i.e. it is oriented towards a single point of culmination, which motivates its semantic narrowing to punctiliarity and singularity. The second path of extension is justified by the tendency that the intensity of an action typically increases its immediacy, its insistence, its urgency and sustainability.

(7) Polysemy of *tsá* (intension)

intension: intensity > punctiliarity > singularity
 intensity > immediacy > urgency

The notion of extension in the case of *ká* subsumes three distinct tracks of semantic transfer, as laid out in (8). Taking extensiveness or extendedness as the starting point, one can say that notions such as repetition, distribution, plurality, duration, completion and continuation have been derived from it by metonymy. Spatial extension often results in a distribution of an action across various settings which entails plurality. Temporal extension increases the duration in durative actions and events, resulting in a continuative reading, and might extend to include the point of completion, in particular in the case of gradually terminative verbs. With punctiliar events and actions, temporal extension results in the notion of repetition.

(8) Polysemy of *ká* (extension)

extension: extensiveness > distribution > plurality
 extensiveness > duration > continuation > completion
 extensiveness > repetition

The extensive adverbial *ká* has a homonym with a delimitative-restrictive sense ‘only’. Thus, in (9a) it serves to exclude the possibility that eventually other body parts could have been affected by the beating. In (9b), the delimitative adverbial *ká* indicates that, after a whole series of other things that had to be planted, there is now only this one final job left to be done. In contrast to the extensive *ká*, delimitative *ká* freely combines with the intensitive adverbial *tsá* (9c). The addition of *tsá* in (9c) profiles the particularity of this last event, putting special emphasis on the restriction to this event, which may entail, in contrast to (9b), that this is the only planting job to be done at all. Thus, while the delimitative marker *ká* highlights the imminent completion of a series, the addition of the intensitive marker *tsá* highlights the particular last event of this series.

(9) Delimitative-restrictive *ká* ‘only’:

(a) *má bwát ká 'wó á'nó úwúŋ*
1sg hit only O3sg at 8.buttocks
‘I beat him only on the buttocks.’

(b) *ù niè kú ká á'n-í-zú ásáŋ*
3sg now have only to-VN-plant 6.maize
‘He only has to plant maize now (after a whole series of other crops he has planted before).’

(c) *ù niè kú tsá ká á'n-í-zú ásáŋ*
3sg now have INT only to-VN-plant 6.maize
‘He only has to plant maize now (as the only planting job to be done at all).’

(d) *ù niè byíbé 'kó ndàw bà?túm*
3sg now ask.pl.IPF only 9.house 1.chief
‘He is asking only for the chief’s house now.’

(e) *ù niè byíbé 'tsá 'kó ndàw bà?túm*
3sg now ask.pl.IPF INT only 9.house 1.chief
‘He is only asking for the chief’s house now.’

(9d-e) illustrate the compatibility of delimitative *ká* with the intensitive adverbial *tsá* in combination with a pluractional verb stem *byíbí*, derived from the simplex *báb* ‘ask’. In (9d), the delimitative adverbial *ká* indicates that a whole list of questions must have been asked before and only this final question is left to be answered now. The addition of *tsá* in (9e) implies that, even though the requester may have many other things to ask on his mind, he suppresses those other questions, momentarily restricting himself to asking only this single pressing question. The use of the pluractional stem here implies that the urgent question to which he restricts himself is to be perceived as potentially part of a multitude of questions.

The intensitive adverbial *tsá* has a near homonym *tsə̀* which is distinct by its low tone and indicates habituality, representing a reduction of the adverbial *tsə̀ŋ* ‘always’. Thus, in (10), *tsə̀* signals the habitual repetition of painful things which come to haunt the child. If *tsə̀* was dropped, the idea of habituality would be lost.

(10) Habitual *tsə̀*:

yá^h wá kô? ní nè úffə̀ ù fwáabé w-íy ŋgé kwí tsə̀ iyè
as child SO.see SO that 8.things 8 hurt.IPF 8-OF as catch HAB LOG
‘Since the child saw that painful things always catch him much [for the reason that he didn’t know to set traps] ...’

3. Spatial source concepts of the adverbials *ká* vs. *tsá*

Apart from the functions subsumed under the labels of extension vs. intension, both adverbials, *ká* vs. *tsá*, are also used for expressing spatial notions or rather, more precisely, a contrast of upward vs. downward vertical path orientation. Thus, *ká* in (11a-b) indicates an upward path of the motion event expressed in the verb *nìy* ‘take’; *tsá* in (12a-c), on the other hand, expresses a downward path of motion events encoded in the verbs *dò?ò* ‘sit, stay’, *mà?á* ‘throw’ and *kúm* ‘bend’.

(11) Upward orientation with *ká*:

- (a) *nîə w-ǝ nìy ká bwàm à wè, ŋwò*
 1.mother 1-D1.P3 take up 9.cup push 3sg.POSS leave

yə á+n-í-zù káw ʔmwí.
 CFG to-VN-go search 6a.water

‘The woman picked up her calabash and went away to go and search for water.’

- (b) *ú ʔntwámí nìy ká bwàm à wé*
 3sg.P3 immediately take up 9.cup push 3sg.POSS
 ‘She picked up her cup immediately.’

(12) Downward orientation with *tsá*:

- (a) *dò?ò ʔtsá*
 sit.IMP down
 ‘Sit down!’

- (b) *mà?á ʔtsá*
 throw.IMP down
 ‘Drop (it)!’

- (c) *kúm ʔná ʔtsá túw k-íy*
 bend.IMP keep.IMP down 7.head 7-OF
 ‘Keep your head bent down!’

These basic spatial meanings of the adverbials *tsá* and *ká* could also be found to interact with polysemous verbs such as *ŋwò* ‘rise; leave, depart’ and polysemous asymmetrical serialisations such as *nù ná* ‘hide; bury’. Thus, the adverbial *ká* activates the change of posture meaning ‘rise’ in the verb *ŋwò* in (13a-b), whereas *tsá* in (13c) blocks this meaning, due to its incompatibility with an upward path orientation, and instead activates the separative meaning ‘leave, depart’.

(13) Interaction of lexical polysemy in *ŋwò* ‘rise; depart, leave’ with vertical path adverbials *ká* ‘up’ vs. *tsá* ‘down’:

- (a) *àzə wà yíŋí ʔw-ǝ ŋwò ká, tswí yə*
 1.sibling 1.child female 1-D1.P3 rise up descend CFG

sò?ò, zù ká? yə sò?ò á+n-í-diy nè ...
 also go start CFG also to-VN-cry that

‘The brother of the girl got up and also went down thither and started once more to cry there [that] ...’

- (b) wán ʔ́ ɲwò ká dzíyʔ́ yé díyʔ́ zú kɔʔ́ mʔ́byí
 1.child D1.P3 rise up saying 3LOG SO.want SO.go SO.see 9.world
 ‘The boy got up saying he wanted to go and see the world.’
- (c) wán ʔ́ ɲwò tsá dzíyʔ́ yé díyʔ́ zú kɔʔ́ mʔ́byí
 1.child D1.P3 rise down saying 3LOG SO.want SO.go SO.see 9.world
 ‘The boy got up saying he wanted to go and see the world.’

A similar constraint triggered by vertical path notions is manifest in the interaction of the basic lexical meaning of the verb *nù* ‘hide’ with the adverbial *tsá* (14a-b), as it combines with the terminative coverb *ná* ‘keep’ in asymmetrical serialisation. In (14a), *tsá* signals the urgency of the required action encoded in the core verb *nù* ‘hide’. In the indicative mood and in combination with past tense reference, its spatial notion of downward path orientation is activated much more commonly instead of the urgency meaning. So the core verb *nù* ‘hide’ in asymmetrical serialisation with the terminative coverb *ná* ‘keep’ acquires the special meaning ‘bury’ (14b).

- (14) Interaction of lexical polysemy in the serialisation *nù ná* ‘hide; bury’ with the vertical path notion ‘down’ vs. the immediacy notion in the adverbial *tsá*:
- (a) wò kí nù ná tsá míə
 2sg OBL hide keep IMM O1sg
 ‘You must hide me immediately!’
- (b) á mɔ́ ʔ́wé nù ná tsá
 S1pl P1.FOC O3sg hide keep down
 ‘We have buried him.’

Just like the adverbial *ká* for the extensive readings, adverbial *ká* for upward orientation is also in a homonymic relationship to the delimitative-restrictive *ká*. This is supported by the fact that both of them could be combined as in (15a-b). However, *ká*’s which represent various notions of extension have not been found to combine with each other. This again confirms the analysis that all of the extensive readings might be grouped as representing a network of polysemy, whereas the delimitative-restrictive *ká* really represents a distinct homonymous lexical entry.

- (15) Combination of *ká* ‘up’ and *ká* ‘only’:
- (a) yáʔ́ yú fálól, kǎi sòŋò ká ʔ́ká kèvób,
 as 3pl SO.chew.IPF every.P3 pull.IPF up only 7.bone
 gáʔ́á ʔ́niá ʔ́tsá, fálól yè ɲàm
 station.IPF keep.IPF down chew.IPF CFG 9.meat
 ‘As they were eating each would pull out only a bone and place it aside while eating the meat.’
- (b) í’yíŋí à líy ʔ́y-á dzíy á-ʔ́wé ná ù nìy ká ká ɲwò
 2.women 2 other 2-D1 say.IPF to-O3sg that 3sg take up only CF
 ‘The other women told her that she should pick it (i.e. the child) only up.’

Most usages of *ká* allow for a free variation with a more complex form, *kwɔʔ́*, which must be identified with the motion verb *kwɔʔ́* ‘ascend’. The crucial point is that this variation does not only affect path-specific readings of *ká*, such as the one in (16a), but also

coverbal role to one specific semantic component of their original full verb meaning which they contribute to the entire SVC. The serialisation in (18) is headed by the core verb *bwɔ̀ɔ̀* ‘burst’, which is followed by a series of four modifying coverbs: *mà?à* ‘throw away’ indicates the detrimental effect of the event on the patient, i.e. the roof of the hut, while the other three coverbs highlight various components of the path of the action, *fyí* ‘exit’ signalling a path out of a container, i.e. the hut, *kwɔ̀ɔ̀* ‘ascend’ indicating an upward direction of the path; and *diáńí* ‘penetrate’ relates the path to a centre or rather an obstacle, indicating that this obstacle is penetrated.

(18) Asymmetrical serialisation of one core verb and four coverbs:

bó ⁺	ngìy	t-ə	díy ⁺	nàì	kó	mómwìy	yú
whenever	13.giraffes	13-D1	SO.want	SO.stretch	up	6b.necks	3pl

bwɔ̀ɔ̀	mà?à	fyí	kwɔ̀ɔ̀	diáńí	yə	ùtá	ú	kótà.
burst	throw.away	exit	ascend	penetrate	CFG	3.ceiling	3	7.hut

‘When the giraffes want to stretch their necks, they burst out immediately through the upper section of the roof of the hut.’

The combination of coverbs in asymmetrical serialisation contributes to blowing up the verbal piece to quite considerable size and complexity. Moreover, the verbal series itself could still be expanded by an outer layer of preposed and postposed adverbials. The internal order of constituents approximates consolidation in a template with fixed slots as represented in the maximal projection in table (21). Here, the verbal core is preceded by a smaller pre-core field and followed by a considerably larger post-core field. Both fields, pre-core and post-core, are subdivided into slots for coverbs and slot(s) for adverbials. Their linear arrangement with respect to each other reflects advancement in grammaticalisation in that the coverbs form an inner layer of elements grouped closer to the verbal core, whereas the adverbials which have lost verbal properties in their career as adverbs, e.g. the centrifugal marker *yə* in (18), form an outer layer, further removed from the inner layer and the core, as indicated by shading in the display.³

Table (21) captures the syntagmatic dimension of a synchronic continuum between the taxonomic categories of verb vs. adverb with three intermediary stages spelt out in (20). In a diachronic perspective, this continuum represents a channel of grammaticalisation in which coverbs tend to develop into adverbials in the course of syntactic reanalysis involving semantic transfer and subsequent adjustment (Heine & Reh 1984: 97-100). Reanalysis and adjustment in this case take the form of a gradual loss of constitutive verbal properties such as the capacity (i) to act as the single core of a verbal predication, (ii) to vary for aspect by an opposition of suffixes \emptyset or *-i* (perfective) vs. *-ə* (imperfective), (iii) to receive tonal marking for the imperfective aspect and for subordination. The gradual loss of these properties results in a cline ranging from the status of a full-fledged verb with all essential verbal properties to a genuine adverb which lacks all verbal properties through three transitional stages defined by various degrees of loss of these verbal properties, representing degrees of adjustment after semantic transfer in the course of syntactic reanalysis and corresponding functionally to what has been termed “verbidis” (Ansre 1966), “verboids” in Obolo (Rowland-Oke 2003: 269-74) or “preverbal modifying verbs” in Yoruba (Bamgboṣe 1974, 1982). Thus in Isu, full motion verbs such as *kwɔ̀ɔ̀* ‘ascend’ and

³ Both the external order of these fields and their internal organisation largely follow iconicity principles in that syntactic linearisation matches the real-world order of event components. Thus, coverbs which serve a precursive function precede the core verb, while termination and resultative coverbs follow.

tswí ‘descend’ whose verbal status is testified by their use as autonomous verbs in (19a-b), represent the first stage, the starting point of the development (20a).

(19) Autonomous usage of *kwó?* ‘ascend, climb’ and *tswí* ‘descend’:

- (a) *má má 'kwó? kâ? f-ìy*
 1sg P1.FOC ascend 19.tree 19-OF
 ‘I have climbed a tree.’
- (b) *má tswí yà íná? í'sú*
 1sg descend CFG 5.country 5:5.Isu
 ‘I am descending to the country of Isu (e.g. from Aghem or Weh).’

In the next step, these motion verbs may undergo semantic reduction to their path meanings in coverbal use (20b), resulting in a situation of polysemy with a coexistence of autonomous verbs, *kwó?* ‘ascend’ and *tswí* ‘descend’, and coverbs with a slightly more general semantic reading, *kwó?* ‘up’ and *tswí* ‘down’, respectively, e.g. in (18). The transition from autonomous to coverb could be accompanied by phonological erosion, as is the case with both *kwó?* and *tswí* which optionally reduce to *ká* and *tsá*, respectively, in coverbal usage, e.g. in (16a-d). As soon as the autonomous verb is dropped in the third step (20c), the remaining coverb still retains all verbal properties except for one, i.e. its syntactic autonomy, producing a new hybrid kind of word class, i.e. hybrid adverbial of type A. In the case of *kwó?* and *tswí*, the autonomous verbs are not dropped, however, phonological erosion marks the functional split: while the full forms *kwó?* and *tswí* could represent both usages, autonomous and coverb, the eroded forms are confined to the coverb usage and cannot be used as autonomous verbs. In the fourth step, the coverb starts losing verbal properties such as the capacity to receive segmental coding of aspect, while it retains those verbal properties marked by tone exclusively (20d). This step results in hybrid adverbials of type B which are distinct from type A adverbials by a slight progression towards the status of a prototypical adverb. In a terminal step, hybrid type B adverbials may be deprived of all residual verbal characteristics, resulting in genuine adverbs maximally distinct from verbs (20e).

(20) Stages of grammaticalisation of adverbials from prior autonomous verbs
 verb > coverb > hybrid adverbial A > hybrid adverbial B > genuine adverb

- (a) verb: retention of full syntactic autonomy
 (b) coverb: semantic reduction, full retention of verbal properties
 (c) hybrid adverb type A: loss of syntactic autonomy as verb, eventual semantic extension
 (d) hybrid adverb type B: loss of segmental coding of aspect, retention of tonal coding of aspect and subordination
 (e) genuine adverb: complete loss of all verbal properties

(21) Internal order of constituents in asymmetrical SVCs⁴

modal, manner	pre- cursion	core verb	effect	path	termin- ation	quality / result	realisation	ext. int.	delim. -restr.	deixis direction	focus
	-1	0	+1	+2*	+3	+4	+5	+6	+7	+8	+9
<i>nám</i> ‘still’	<i>bù</i> ‘come’		<i>mà?à</i> ‘throw away’	<i>fý</i> ‘exit’	<i>dǎ?ǎ</i> ‘stay’	<i>dzwàb</i> ‘good’	<i>k’è</i> ‘in vain’	<i>ká</i> EXT	<i>ká</i> ‘only’	<i>wò</i> CPT	<i>ɲwò</i> CF
<i>kám</i> ‘again’	<i>zù</i> ‘go’			<i>kwǎ?</i> ‘ascend’	<i>ná</i> ‘keep’	...	<i>kwài</i> ‘success- fully’	<i>tsé</i> INT		<i>yè</i> CFG	<i>wài</i> NEG
<i>twò?</i> ‘really’	<i>ɲwò</i> ‘leave’			<i>tswí</i> ‘descend’	<i>mài</i> ‘finish’						
<i>màn</i> ‘just’				<i>ɲí</i> ‘enter’							
<i>tsàŋ</i> ‘always’				<i>tsý</i> ‘pass’							
...				...							

⁴ This overview is an approximation, since the paradigmatic arrangement does not always reflect complementary distributions. Thus, items in slots marked by asterisks are definitely not in complementary distribution and could be combined, as far as their semantics allows. Moreover, “...” indicates non-exhaustive listing.

In this continuum, both markers, i.e. *ká* for extension of action and *tsá* for intension of action, together with their lexical sources *kwó?* and *tswí*, respectively, cover stage one up to stage four (20a-d), as detailed in (22). Both develop spatial coverbs by semantic reduction to the path notion of their original meanings as autonomous motions verbs. These coverbs develop distinct allomorphs by optional phonological reduction. In their reduced allomorphic forms *ká* and *tsá*, the coverbs undergo semantic extension well beyond the spatial domain to cover notions such as distributive, spread impact, durative, completive, continuative, repetitive and pluractional on the side of *ká* and intensitive, concentration, punctiliarity, singularity, immediate impact and urgent effect indication on the side of *tsá*. By morphosyntactic criteria these instances have advanced up to stage (20d) in grammaticalisation, i.e. they have gained the status of hybrid adverbials of type B by virtue of the extent of loss of verbal properties. While they lack the capacity to receive segmental coding of aspect, they still retain tonal marking for aspect and subordination, which prevents them to be categorised as genuine adverbs devoid of all verbal morphology. In their fuller forms *kwó?* and *tswí*, the coverbs undergo similar semantic extensions beyond the spatial domain, albeit to remarkably different degrees. Thus, while the full form *tswí*, in alternation to its reduced form *tsá*, is restricted to the intensitive notion, *kwó?* could be used in free alternation to *ká* for any of the non-spatial notions. Since both, *kwó?* and *tswí*, retain their capacity to form segmentally distinct aspectual stems in these non-spatial usages, they have to be categorised as hybrid adverbials of type A. Therefore, both of the hybrid adverbials *ká* and *tsá*, together with their lexical source verbs *kwó?* and *tswí*, straddle the borderline between the word classes of coverb and hybrid adverbial which is marked by the dotted line in (22), representing an instance of heterosemy, as indicated by double-lining.

(22) Heterosemy of *kwó?* ~ *ká* and *tswí* ~ *tsá*

	<i>kwó?</i>		<i>tswí</i>			
	allomorphy	meaning	allomorphy	meaning		
(a) verb	<i>kwó?</i>	-	'ascend'	<i>tswí</i>	-	'descend'
(b) coverb	<i>kwó?</i>	<i>ká</i>	'up'	<i>tswí</i>	<i>tsá</i>	'down'
(c) hybrid adverb A	<i>kwó?</i>	-	distributive, spread impact, durative,	<i>tswí</i>	-	intensitive
(d) hybrid adverb B	-	<i>ká</i>	completive, continuative, repetitive, pluractional	-	<i>tsá</i>	intensitive, concentration, punctiliarity, singularity, immediacy

Similar processes of grammaticalisation via semantic generalisation accompanied by phonological reduction and loss of verbal properties, resulting in a situation of synchronic heterosemy, could be observed with the centripetal adverbial *wà* (see table 21, column +8) which derives from the deictic motion verb *bù* 'come' via an intermediary stage of reduction such as *bà* (Kießling 2011).⁵

⁵ Its centrifugal counterpart *yà*, on the other hand, represents a reflex of Proto-Bantu **gènd* 'go, walk' (Guthrie 1970: 214, Bantu Lexical Reconstructions 3) or **(g)ènd* 'walk' (Meeussen 1980: 55) which is reflected as **gèn* 'go' or **gièn* 'walk' in Proto-Eastern-Grassfields (Elias, Leroy & Voorhoeve 1984: 91, 103), otherwise absent from Isu.

4. Conclusion

The contribution of this article to the directionality topic is a diachronic one: it presents evidence of less common avenues of development of path verbs for verticality beyond the spatial domain and points to the importance of dynamicity as a source concept for the construal of non-dynamic concepts such as qualities and quantities.

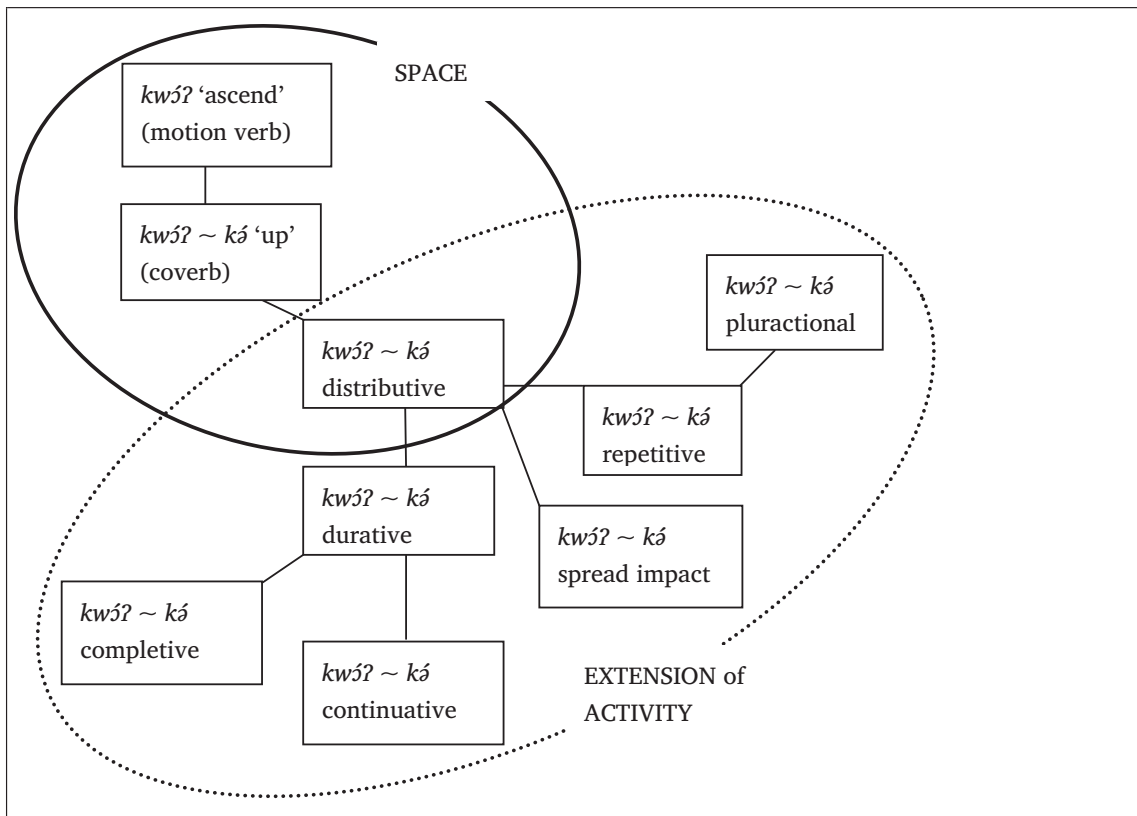
Both adverbials under discussion, i.e. *ká* and *tsá*, derive from prior motion verbs *kwó?* ‘climb, ascend’ and *tswí* ‘descend’, respectively, which have undergone various processes of semantic extension and concomitant morphosyntactic and phonological reduction in their usage as coverbs in asymmetrical serialisation. Their diachronic development produces complex networks of polysemy and heterosemy, as detailed in (23-24). From a cognitive perspective, their etymological origin in the path verbs *kwó?* ‘ascend’ and *tswí* ‘descend’ points to the importance of vertical motion schemata for structuring various non-dynamic and non-spatial domains of experience.

The polysemous adverbial *ká* and its development from the motion verb *kwó?* ‘ascend’ is presented as a semantic network in (23), in synchronisation with all concomitant steps of phonological reduction and morphosyntactic adjustment. Thus, *kwó?* ‘ascend’ follows a path of grammaticalisation leading in several successive stages of semantic extension from an autonomous verb over a coverb for upward path orientation to an adverbial for the same function and an adverbial for various non-spatial functions such as distributive, repetitive, pluractional, spread impact indication, durative, completive and continuative which could be subsumed under the label of extension. The etymological hypothesis linking the extensive adverbial senses with a prior sense of upward locomotion is supported by semantic and phonological evidence, e.g. by the synchronic coexistence of both forms, the original *kwó?* and the reduced *ká*, for the extensive adverbial meanings, as seen in (16).

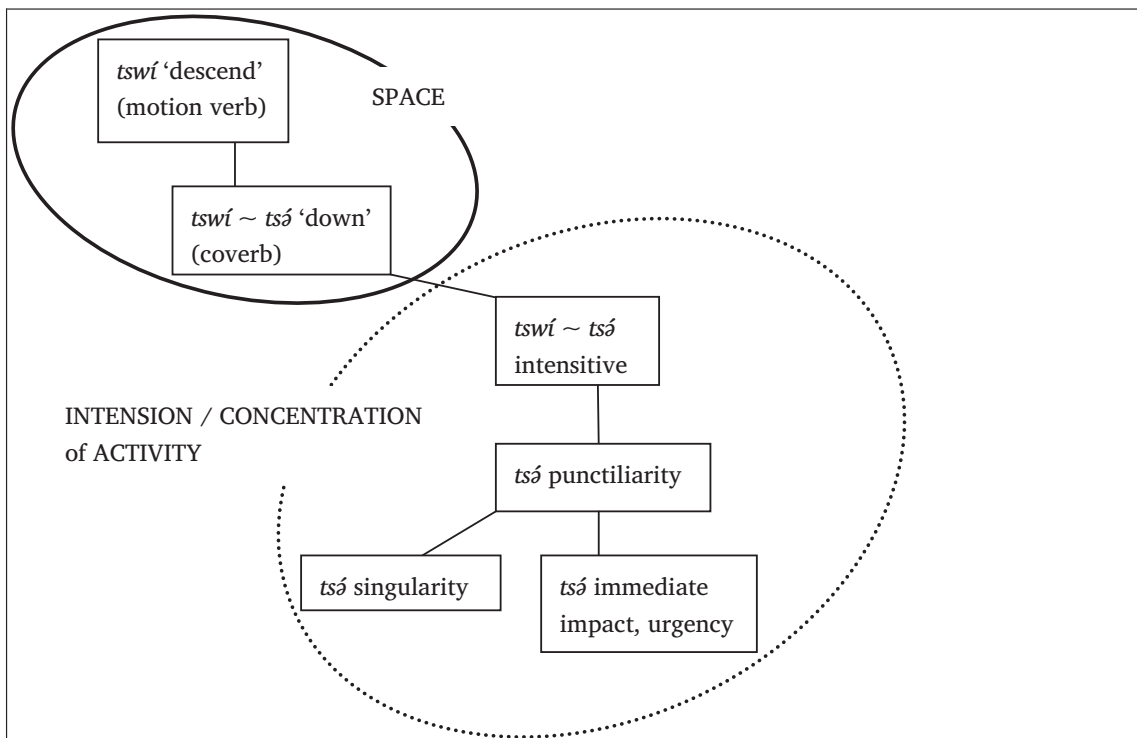
The semantic network of the adverbial *tsá* and its development from the motion verb *tswí* ‘descend’ is presented in (24) with all steps of phonological reduction and morphosyntactic adjustment. It shows that *tswí* ‘descend’ follows a path of grammaticalisation leading in several successive stages of semantic extension from an autonomous verb over a coverb for downward path orientation to an adverbial for the same function and an adverbial for various non-spatial functions such as intensive, concentration, punctiliarity, singularity, immediate impact and urgent effect indication which could be subsumed under the label of intension. The lack of synchronic coexistence of the original verbal form *tswí* and the reduced adverbial form *tsá* for some adverbial meanings points to a more advanced stage of grammaticalisation of *tsá*, as compared to *ká*.

Comparing both adverbials, *ká* and *tsá*, and their verbal sources, it is remarkable that at the starting point as well as at the (preliminary) end point of grammaticalisation, both contrasting partners are linked by antonymy. At the starting point, the full verbs *kwó?* ‘ascend’ and *tswí* ‘descend’ act as lexical antonyms with respect to vertical path orientation. This antonymy is retained in the adverbials for non-spatial notions which developed from these lexical items: the antonymy of the vertical path orientation has been transposed to an antonymy of intensification or concentration vs. extension. In a parallel development on the phonological level, reduction leaves the antonymic adverbials with a minimal formal contrast in the initial consonant.

(23) Semantic network of adverbial *ká* derived from motion verb *kwóʔ* ‘ascend’



(24) Semantic network of adverbial *tsá* derived from motion verb *tswí* ‘descend’



The above findings are relevant to the understanding of directionality as a source concept in grammaticalisation in general and the cognitive motivations underlying the exploitation of verticality concepts in particular. The metaphorical construal of qualities, quantities, states, manners, modalities and aspects in terms of spatial models such as vertical orientation and container schemata has been observed in languages of widely divergent genetic affiliations worldwide on such a broad scale that the experience of space has been claimed to represent a basic model of thinking (Johnson 1987, Lakoff 1987: 283, Lakoff & Johnson 1980) and a major cognitive foundation of grammar in a universal perspective (Svorou 1994, Heine 1997: 35-65), conforming with the hierarchy of metaphorical “abstraction” presented in Heine, Claudi & Hünemeyer (1991: 48, 159-160, 189) and reproduced in (25). This hierarchy claims that fundamental domains of human experience are linked in such a way that image schemata which structure a domain to the left in figure (25) are irreversibly used for metaphorical mapping into corresponding configurations in domains to the right, e.g. the domains of time and quality are understood in terms of image schemata which structure the domain of space, but not the other way round. Thus, the linear arrangement of these domains represents an order of cognitive accessibility which justifies the claim that domains to the right are more abstract than domains to the left.

- (25) Hierarchy of “abstraction” in categorial metaphors (Heine, Claudi & Hünemeyer 1991: 48, 159-160, 189)
 PERSON > OBJECT > ACTIVITY > SPACE > TIME > QUALITY

More specifically, the case of the Isu adverbials *ká* for extension and *tsá* for intension and their etymological origin in the vertical path verbs *kwó?* ‘ascend’ and *tswí* ‘descend’, respectively, testify the dynamic conceptualisation of qualities and quantities in terms of vertical path schemata: spatial and temporal extension of activities is “up”, whereas intensification, concentration and punctiliarity is “down”. While this finding supports an affiliation of the category QUANTITY in the above hierarchy, possibly on a par with QUALITY, it is striking here to see that up-down path schemata are not always utilised in ways familiar from European languages when it comes to capturing scalarity. Thus, in contrast to the metaphorical transfer which maps “more” onto “up”, as observed in English (Lakoff 1987: 276f., 283; Johnson 1987: 121-124; Lakoff & Johnson 1980: 14-19), Isu partly uses the verticality schema in reverse orientation, i.e. usages of the path coverb *tswí* ‘descend’ and the hybrid type B adverb *tsá* which is derived from it attest to a mapping of “more” onto “down”. However, this usage seems to be restricted to qualitative aspects, i.e. scales of degree and intensity. Whenever strictly quantitative aspects are concerned, as in the case of spatial and temporal extension, the opposite mapping of “more” onto “up” is attested in usage of the hybrid type B adverb *ká* which is derived from *kwó?* ‘ascend’.

Abbreviations

CF	clause focus/predication focus	NEG	negative
CFG	centrifugal	NS	non-subject
CPT	centripetal	O	object
D1	proximal demonstrative	OBL	obligative
EXT	extension	OF	out-of-focus marker
FOC	focus	P1	hodiernal past
F1	hodiernal (near) future	P3	indefinite past
F2	definite (distant) future	pl	plural
HAB	habitual	POSS	possessive
IMM	immediacy marker	sg	singular
IMP	imperative	S	subject
INT	intension	SJN	subjunctive
IPF	imperfective	SO	subordinative
IS	impersonal subject	SVC	serial verb construction
LOG	logophoric	VN	verbal noun marker

Numbers refer to person when followed by sg (singular), pl (plural), incl (inclusive), excl (exclusive) or log (logophoric). Otherwise, they refer to noun classes. Combinations such as 5:5 in the glossing line indicate the fusion of an associative linker referring to the nominal class of the possessor head noun, e.g. 5, and a subsequent nominal prefix of the possessed noun, e.g. 5, in a nominal possessive construction.

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