1. INTRODUCTION

The aim of this paper is to describe the notion of Orientation within the typology of Frames of Reference (FoR) in Jaminjung and Kriol. Jaminjung is a Non-Pama-Nyungan Australian Aboriginal Language with an estimated number of 50 speakers in the Victoria River area in the Northern Territory. However, the major community language in the area today is Kriol, an English-lexified creole spoken by approximately 20,000 people.

Levinson (2003, 2006) influentially proposed the existence of three FoRs in natural languages, namely intrinsic (involving an object-centred coordinate system), relative, (a coordinate system centred on the main axis of the body), and absolute (horizontal as well as vertical fixed directions). An approach developed by Terrill and Burenhult (2008) states that orientation rather than a particular FoR is also used to establish spatial reference. Such languages seem not to employ independent cues to impose external coordinates and do not describe location.

One of Jaminjung’s noteworthy features for the description of spatial reference is the existence of two predicative word classes, namely closed-class ‘main’ verbs and open-class ‘coverbs’. The language furthermore employs a drainage-based absolute FoR which is usually only used in large-scale space and only to indicate location of a place or entity relative to the deictic centre, as well as source and goal of motion. In small-scale descriptions only orientational information is given in absolute coordinates as shown in example (1).1

1) mayi=biya jirrama bunthu-yu janyungbari ngiyina-wurla
man=now two 3du-be.PRS other DIST-DIR

3sg-be.PRS=SFOC nose other upstream-L.ALL 3sg-be.PRS
‘there are two men, one has his nose that way, the other is facing upstream’
(Men & Tree 4.10; 4.9 matched. Director and matcher facing towards the river; river visible)
(Schultze-Berndt, 2006: 106)

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1 The abbreviations used in this paper are: 1=first-person, 2=second-person, 3=third-person, ABL=ablative, adj=adjective, adv=adverb, ALL=allative, conj=conjunction, DAT=dative, DIR=directional, DIST=distal demonstrative, du=dual, excl=exclusive, FUT=potential/future, IMP=imperative, IMPF=(past)imperfective, incl=inclusive, INTJ=interjection, LOC=locative, loc=locational, L.ABL=ablative (locationals), L.ALL=allative (locationals), NOW=’now, then’ (clitic), pl=plural, pro=pronoun, PROX=proximal demonstrative, PRS=present, PST=past-tense, QUAL=quality, RDP=reduplication, SFOC=sentence focus, sg=singular, TR=transitive marker, tauwe= Kriol is marked in Jaminjung examples in cases of code-switching with underscore.
‘Standing’, or placement, information however, is given in terms of intrinsic coordinates:

2) *wirlga* warlyang *ga-yu*, *birdigud* *birang* *ga-yu*
   foot in.front 3sg-be.PRS tin behind 3sg-be.PRS

   *wirlga-ngunyi*
   foot-ABL
   ‘a shoe is in front, a tin is behind (from) the shoe’
   (can of coke and sandal)
   (CHE 282, 06/10/98)²

This paper investigates the use of orientation rather than location further in Jaminjung and Kriol. In addition to a comparative study in the respective languages, the paper also considers possible differences between static and motion descriptions of orientation. It furthermore appears that there are more functional similarities between motion and orientation than between motion and orientation.

Another area of investigation involves the use of landmark terms as reference points for orientation rather than absolute direction. This is illustrated with *taun-wei* in the Kriol example below taken from a narrative.

3) *Melan* go-bek *den langa modiga,*
   1pl.excl go-back then loc car

   \go *langa taun-wei*.
   go loc town-towards
   ‘Then we went back to the car and headed towards town.’
   (Sandefur, 1982: lesson 32)

2. **ORIENTATION AS A STRATEGY FOR SPATIAL REFERENCE**

Levinson (2003: 56) states in the context of his well-known typology of Frames of Reference that ‘any and every spatial representation, perceptual or conceptual, must involve a Frame of Reference’. Terrill and Burenhult’s (2008) analysis of Jahai and Lavukaleve reveals an additional strategy for spatial reference. These languages orient the intrinsic side of the figure towards another object or direction rather than locate a figure with respect to a ground within a FoR:

4) ‘*He is turned away from the tree-trunk. He turns his back towards Cfs, so that he turns his chest towards the wooden house.*’
   (Terrill and Burenhult, 2008: 106)

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² Unpublished examples are taken from a 40 hour corpus of Jaminjung compiled by Eva Schultze-Berndt and are marked with an internal reference followed by the date of the recording.
Example (4) is a translation from Jahai and shows how a figure (he) is oriented with respect to a place (Cfs), and two grounds (tree trunk/wooden house). The intrinsic sides (front/back) of the animate figure (he) are used to project spatial relation towards the landmark and grounds. This is a clear difference to the FoR strategy where the figure (he) would be located with respect to the landmark (Cfs) and grounds (tree trunk/wooden house) as in example (5) within an intrinsic FoR:

5) Cfs and the tree trunk are behind him and the wooden house is in front of him.

Terrill and Burenhult describe the notion of orientation for static spatial reference. I will show that the functional features of orientation are parallel to those of motion descriptions. Both involve the orientation of the intrinsic sides of a figure and a reference point. This can be an implicit or explicit ground, an absolute direction, a landmark or a deictic term. Orientation is expressed through the direction of gaze or an intrinsic front/back/side of the figure towards a reference point. Parallel to that, motion descriptions use terms for the direction of motion towards/away from a reference point. Location within FoRs on the other hand locates a figure with relation to a ground which can only be an object or a person.

2.1. Spatial reference in Jaminjung

2.1.1. Location

To locate objects in space, Jaminjung mainly employs an intrinsic FoR for small-scale description and an absolute FoR based on the direction of the water flow of a local or more global watercourse for large-scale description. For intrinsic (object-centred) location three types are identified by Schultze-Berndt involving body-part nominals, the absolute directionals based on verticality thamirri – ‘underneath’ and thangga ‘on top/above/up’ converted into intrinsic terms by ablative case and one of the two coverbs walyang ‘in front’ and birang ‘behind’ (Schultze-Berndt, 2006: 108). An example for the use of thangga and thamirri is given in (6).

6) bayirr ga-yu thangga-yin, janyung-bari
supported 3sg-be.PRS above-L.ABL next-QUAL

langin mugurn ga-yu thamirri
wood lie 3sg-be.PRS below
‘one is leaning on top, another stick is lying underneath’
(two brooms lying across each other)
(TIM203)

I will employ the term ‘reference point’ whenever referring to orientation and motion descriptions and the term ‘ground’ to describe reference in location.
Four terms indicating absolute FoR belong to the class of locational nouns. These are for horizontal reference *manamba* ‘upstream’ and *buya* ‘downstream’ and *thangga* ‘up’ and *thamirri* ‘down’ for vertical reference. The horizontal terms are only used to describe a location where the ground is implicit and also the deictic centre as illustrated in (7):

7) \( brij = \text{biyang} \ \text{gayu}=ni \ \text{manamba} \ \text{yinju} \ \text{manamba} \)
   \(
   \text{bridge} = \text{NOW} \text{ 3sg-be.PRS=SFOC upstream} \text{ PROX upstream}
   \)
   ‘the bridge is upstream (from here), here, upstream’
   (F04014, 17/06/98)

Generally, Jaminjung does not employ a relative FoR, but the coverbs *walyang* ‘in front of’ and *birang* ‘behind’ can have relative uses. Then they are interpreted as being a ‘ground between viewer and figure’ (Schultze-Berndt, 2006: 109). This FoR is only used if the ground (such as the round-shaped *bottle*) does not have specific intrinsic (side) facets of its own.

8) \( \text{birang} \ \text{ga-yu} \ \text{mawud-gi} \)
   \(
   \text{behind} \ \text{3sg-be.PRS} \ \text{glass-LOC}
   \)
   ‘it is behind the bottle’
   (Schultze-Berndt, 2006: 109)

2.1.2. Orientation

There are two ways to express orientation of the intrinsic sides of the figure in static descriptions in Jaminjung. First, the absolute locational nouns *buya* and *manamba* and ad-hoc landmark terms are used in small-scale descriptions in combination with expressions of direction of gaze (9). These terms are not employed to indicate location on a small scale for static descriptions.

9) \( \text{nindu}=\text{biyang} \ \text{manamba} \ \text{mung} \ \text{ga-yu.} \)
   \(
   \text{horse-NOW} \ \text{upstream} \ \text{look.at} \ \text{3sg-be.PRS}
   \)
   ‘the horse is now looking upstream’
   (D30128)

Additionally, there is a set of coverbs of spatial configuration, *jarda* ‘turning one’s back’ and *wamam* ‘facing’, which encode the orientation of a specific side of a figure with respect to the deictic centre or an explicit or implicit ground.

10) \( \text{jarda} \ \text{ga-yu} \ \text{ngarlu} \ \text{ngagaj-gi} \ \text{ga-yu} \ \text{birang} \)
   \(
   \text{face.away} \ \text{3sg-be.PRS} \ \text{shade} \ \text{back-LOC} \ \text{3sg-be.PRS} \ \text{behind}
   \)
   ‘he is turning his back (to me), a shade (tree) is behind his back’
   (Schultze-Berndt, 2006: 110)

Example (10) also illustrates the contrast of a coverb encoding orientation of the intrinsic sides of a figure (*jarda*) and a coverb encoding a region projected
from the intrinsic sides of a ground (birang) (Schultze-Berndt, 2006: 110). Jarda here encodes only an intrinsic side of the figure. Interestingly, these coverbs are also used with inanimate figures such as the car in example (11).

11) wirib- ah, wirib birang, motika, ... im sidan, ... sein we, dog ah dog behind car 3sg sit.down same way

\[\text{im tharda-ngining,} \]
3sg face.away-L.ALL

‘the dog, ah, the dog is behind, the car is standing the same way, it’s facing that way’

(E13260, 17/04/99)

This example also nicely exemplifies code-switching as a common feature of Jaminjung today\(^4\). The coverb birang normally indicates an intrinsic relation. In this example, however, there is no explicit ground for the figure wirib. The only clue to the location of the dog (wirib) is in the description of the orientation of the figure motika\(^5\) facing towards an unspecified deictic centre whose explicit location probably depends on the location of the speaker.

Overall, orientation seems to be Jaminjung’s preferred strategy in small-scale spatial reference. Example (12) shows the use of the coverb linkid where the intrinsic facets of the figure (‘he’) determine orientation through the direction of gaze towards a reference point (gurrurrij).

12) \[\text{linkid-ngunyi ga-yu;} \quad \text{linkid-ngunyi sidewards-ABL 3sg-be.PRS sidewards-ABL} \]

\[\text{mung gani-ngami gurrurrij watch 3sg:3sg-see:PRS car} \]

‘he is at the side, from the side he is looking at the car’

(CHE350)

2.1.3. Motion descriptions vs. static descriptions

In addition to representing only orientation, but not location in small-scale descriptions, horizontal absolute terms indicating the direction of river flow seem to be used exclusively for motion descriptions on a large scale to indicate the direction or goal or the source of motion (13). This observation indicates then that motion in its function is actually more similar to orientation than to location. For both orientation and motion the intrinsic facets of the figure, not a ground, are used to indicate either orientation towards a reference point or the direction of motion towards a goal.

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\(^4\) Kriol is marked with ‘____’.

\(^5\) The term for ‘car’ motika although taken from Kriol is not an instance of code-switching but a loanword from Kriol.
13) **manamba ba-jga, laginy ba-jga, jamurrugu na jid**

upstream IMP-go turnoff IMP-go down now go.down

‘go upstream, take the turnoff, then down downwards (i.e. towards the river)’

(Schultze-Berndt, 2006:108)

Placenames and landmark terms can also be used to indicate the goal or source of a motion event. These are then usually ablative and allative-marked respectively.

14) **manamba, // juwud-gu, .. nga-w-ijga, // <Katherine>-bina,**

upstream eye-DAT 1sg-FUT-go <place.name>-ALL

‘I will go upstream for my eyes (to have my eyes fixed), to Katherine’

(E16544, 14/05/98)

There are two coverbs of oriented motion which operate outside FoRs but indicate the direction of motion. Burduj ‘go up’ and jid ‘go down’ occur in combination with the verbs of locomotion such as -ijga ‘go’ and -ruma ‘come’ and jid can occur with a verb of change of location -ardba ‘fall’⁶. Example (15) shows the use of jid with -ardba to indicate the orientation/direction of motion whereas the absolute locational thamirri describes the location of the ground together with the allative-marked gulban.

15) **jid ga-dba-ny warrangan-nguni thamirri gulban-bina**

go.down 3sg-fall-PST cliff-ABL below ground-ALL

‘he went down from the cliff down to the ground’

(D14023)

The existence of these coverbs is unsurprising. Cross-linguistically, specialised motion verbs or verb particles to express direction (“orientation”) of motion are common and this feature is also found in Kriol. However, orientation in static description seems to be much rarer and a feature worth adding to Levinson’s FoR typology of (static) spatial reference.

In conclusion one can say that Jaminjung mainly uses an intrinsic FoR to express location in small-scale description. Furthermore, location is expressed with vertical absolute terms used intrinsically. Horizontal absolute terms always indicate the viewer as ground and furthermore only express orientation not location in small-scale descriptions. As such, the ground then is always implicit not explicit. Orientation is expressed by a special set of spatial coverbs and with absolute terms. Horizontal absolute terms seem to be used only for motion expressions and to indicate orientation. Relative terms (birang/walyang) are used only marginally.

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⁶ For further details on the difference between verbs of locomotion and verbs of change of location, please refer to Schultze-Berndt, 2000: chapter 5.
2.2. Spatial reference in Kriol

Kriol is spoken by 20,000 people throughout the north of Australia. There are a number of different varieties showing slight lexical, grammatical and phonetic differences. A systematic comparison of these has not been undertaken yet. The terms *lodaun/haidap* ‘downstream/upstream’, for example, are only in use in the Victoria River variety of Kriol.

2.3. Location

Generally, Kriol uses intrinsic as well as absolute FoR to locate objects in space. There are no instances in the data for a relative FoR in Kriol. Intrinsic terms are *biyain/biyainwei/biain(langa)* ‘behind’ and *lida langa/frant/la lid la* ‘in front’. Example (16) shows the use of *biyainwei* with the figure *det gel* and *yu* as the ground incorporating intrinsic facets.

16) *det gel slip -in biyainwei langa yu*
   adj  girl sleep-TR behind loc 2sg
   ‘The girl sleeps behind your back.’
   (Lee, 2004: biyainwei)

Furthermore, vertical absolute terms can also be used intrinsically. Example (17) locates the figure *dei* in relation to the ground *brij* using the locational *andanith*.

17) *dei bin dai andanith la det wanim... brij...*
   3pl  PST  die underneath loc  adj  what's-it  bridge
   ‘when they died under that what's-it... bridge...’
   (Angelo, Denise Text 1: FLADWADA: BR & OR: Binjari: 23.2.98, line 203)

Absolute horizontal terms are restricted to *sanraiswei/sainraissaid* ‘east’ and *jangodan/sangodan* ‘west’ as well as, for the Victoria River variety, *lodan/lodaun* ‘downstream’ and *haidap* ‘upstream’.

18) *Dei bin abum sambala klebabalamen*
   3pl  PST  have:TR  some wise men

   *langa det najawan kantri sanraiswei*
   loc  adj  another.one  country  east
   ‘There are some wise men in another country in the east’
   (Kriol Bible, Matthew 1)

In example (18) the location of the figure *sambala klebalamen* is identical with the location of the ground *najawan kantri* whose location is specified by the horizontal absolute directional *sanraiswei*. 
2.3.1. Orientation

Kriol also uses a term for the direction of gaze to indicate the orientation of a figure. In (19) the orientation of the cow’s (buliki) head is expressed with a verb of direction of gaze lukinat towards a deictic reference point (dijey/you wei). Example (20) shows the use of giben bekbon ‘turned away’ indicating that the figure (im) is turned away from the reference point (im).

19) buliki seim wei olabat luk dijey, luk-in-at\ langa yu wei\
cow same way 3pl look this.way look-TR-at loc 2sg way
‘the cow looks in the same direction as them –this way, it looks in your direction’
(E13261)

20) Im giben bekbon la im.
3sg turn back loc 3sg
‘He turned his back on him/turned away from him.’
(Lee, 2004: bekbon)

Orientation can additionally be indicated through absolute terms. Example (21) shows ap semantically incorporating an intrinsic feature in the figure used in small-scale description. Orientation itself, however, is indicated with respect to an absolute (vertical) direction. The adverb ontop here provides the absolute location (vertical direction projecting from the viewer) not just direction.

21) ooo wi bin luk jeya buligi bin jidan leig
INTJ 1pl PST look there cow PST stay leg

ap ontop la tri, buligi (laughs)
upwards above loc tree, cow
‘ohhhh, we looked and a cow was there (with its) legs up (in the air) up in the tree, a cow!’
(Angelo, Denise Text 1: FLADWADA: BR & OR: Binjari: 23.2.98, line 75)

There are no instances of the horizontal absolute terms used for the description of orientation found in the data so far. These seem to be only employed to indicate motion and instances where the location of the figure is identified in relation to an implicit ground. In conclusion, one can say that the use of orientation seems to be much rarer in Kriol than in Jaminjung. The use of the terms for the direction of gaze seems parallel to the Jaminjung examples which might suggest a substrate influence on Kriol. The lack of examples for orientational use in Kriol suggests that orientation is indeed a rare notion of spatial reference in a cross-linguistic perspective.
2.3.2. Motion vs. static description
The use of the horizontal absolute terms in large-scale motion descriptions is attested in the data.

22) *im go laik lodaun, en haidap*  
    3sg go adv downstream conj upstream  
    ‘He goes downstream and upstream’  
    (D13014)

Kriol seems to use absolute terms only for large-scale motion descriptions and if the terms are the deictic centre/ground of a static description. *Dei kam brom sanraiswei.*

Similar to Jaminjung’s specialised oriented motion coverbs, Kriol employs derived motion verbs indicating the direction/orientation of motion. These do not operate within FoRs but are exclusively used for motion descriptions and orient the moving figure towards its goal. This observation is unsurprising as such specialised verbs are found cross-linguistically (e.g. English particle-verbs go up/go down or German hochgehen/runtergehen).

23) *dis du boi bin dal–im im, gaman*  
    pro two boy PST tell–TR 3SG come:IMP  
    wi gu–dan iya la grik  
    1pl go–DIR adv loc creek  
    ‘These two boys told him, “Come on, we are going down here to the creek”’.  
    (Munro, 2005: 132)

In Kriol, location is expressed with both absolute and intrinsic terms. There do not seem to be terms for *left/right* in regular use. As such, it is questionable whether or not a relative FoR is in use or not. Orientation is expressed with horizontal and vertical absolute terms for large-scale direction in motion description and absolute terms used intrinsically in small-scale description. Horizontal absolute terms seem to be used exclusively for motion expressions. Vertical absolute directionals seem to employ a distinction between exclusive motion use (*ap/dan*) and static as well as motion use (*antap/andanith*).

3. CONCLUSION

This short analysis shows that Levinson’s (2003: 97) claim that ‘all the distinctions in frames of references and their instantiation … carry over from the static to the dynamic subdomain of spatial description’ does not hold true. There are specialised verbal motion forms such both in Jaminjung and Kriol to describe motion events outside FoRs. In Jaminjung these are the coverbs *burdij* ‘go up’ and
jid ‘go down’. Derivational verbs of motion such as kamdan ‘come down’ and gobek ‘go back’ are used in Kriol to indicate the direction of motion.

Motion descriptions such as the Kriol example (24) show the functional similarities between descriptions of orientation and motion. In fact, the figure (mibala najalot) is oriented toward the direction of motion (jangodan) just as in the orientation Jaminjung example in (12) where the intrinsic facets of the figure (‘he’) determine orientation through the direction of gaze.

24) Mibala najalot bin go win na  
1sg other PST go+in NOW

raidap - raidap jangodan  
RDP-right.up west
‘The others and I went all the way to the western side.’  
(Sandefur 1982, lesson 32)

Including the notion of Orientation into framework of a language’s spatial reference additionally reveals that motion, in its function, is more similar to orientation than location in orienting the facets of a figure in relation to absolute directionals, landmarks or a reference point. This observation is worth further investigation. The data base for this analysis is, at this point in time, limited and needs specific fieldwork to examine spatial reference and particularly the notion of orientation and motion descriptions within and outside FoR typology.

REFERENCES