6   Prolegomena to a Kilivila grammar of space

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6.1   Introduction

This chapter presents preliminary remarks on some of the central linguistic means speakers of Kilivila use in expressing their conceptions of space, that is, for referring to objects, persons and events in space.[1] After a brief characterization of the language and its speakers, the chapter sketches how specific topological relations are encoded, how motion events are described and what frames of spatial reference are preferred in what contexts for what means and ends. The paper ends with a summary of the major patterns in topology, motion and frames of references, and with a programmatic outline of how to write a complete grammar of space.

As a member of the Cognitive Anthropology Research Group (now the Language and Cognition Group) and the 'space project' I have been intensively studying and researching the conceptualization of space, spatial reference and the lexicon of spatial expressions in Kilivila for the last nine years. I have been collecting a rich corpus of both elicited and naturally produced data on various kinds of spatial references, on space conceptions and on the actual use of spatial language in various situations in everyday life on the Trobriands. I have been immensely broadening my Kilivila spatial vocabulary and I have been finding many extremely interesting examples of how Kilivila lexicalizes certain spatial configurations of objects themselves, and with respect to their orientation and to their location in relation to each other. However, I want to emphasize that all the data I have been collecting so far are still vastly underanalysed and await further careful analyses. Thus, this contribution can have only the status that is indicated by its title.

6.2   Kilivila - the language of the Trobriand Islanders

Kilivila, the language of the Trobriand Islanders, is one of forty Austronesian languages spoken in the Milne Bay Province of Papua New Guinea.[2] It is an agglutinative language and its general word-order pattern is VOS (Senft 1986). The Austronesian languages spoken in Milne Bay Province[3] are grouped into twelve language families; one of them is labelled Kilivila. The Kilivila language family encompasses the languages Budibud (or Nada, with about 200 speakers), Muyuw (or Murua, with about 4,000 speakers) and Kilivila (or Kiriwina, Boyowa, with about 25,000 speakers); Kilivila is spoken on the islands Kiriwina, Vakuta, Kitava, Kaile'una, Kuiawa, Munuwata and Simsim. The languages Muyuw and Kilivila are each split into mutually understandable local dialects. Typologically, Kilivila is classified as a Western Melanesian Oceanic language belonging to the 'Papuan-Tip-Cluster' group (Capell 1976: 6 and 9, Ross 1988: 25, 190ff., Senft 1986: 6).

The Trobriand Islanders have become famous, even outside of anthropology, because of the ethnographic masterpieces on their culture published by the anthropologist Bronislaw Kaspar Malinowski, who did field research there between 1916 and 1920 (see Senft 1999a). The Trobrianders belong to the ethnic category called 'Northern Massim'. They are gardeners, doing slash and burn cultivation of the bush; their most important crop is yams. Moreover, they are also famous for being excellent canoe builders, carvers and navigators, especially in connection with the ritualized 'Kula' trade, an exchange of shell valuables that covers a wide area of the Melanesian part of the Pacific (see Malinowski 1922, Leach and Leach 1983, Persson 1999). The society is matrilineal but virilocal.

Kilivila is of special interest to linguists for various reasons:[4] It is a language with VOS word order as its unmarked word-order pattern, it is a language with

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[2] Today 869 languages are still spoken in Papua New Guinea; however, most of these languages (but not Kilivila) are highly endangered.

[3] In Milne Bay we also find 'at least eight non-Austronesian languages' (Lithgow 1976: 446).

[4] Besides my own linguistic work on Kilivila (for a selection of my publications see Senft (1996a: 366-7, 359)) there is Fellows' (1901) early sketch of aspects of Kilivila grammar, an unpublished (and also undated) manuscript by Father B. Baldwin (M.S.C.) of the Catholic Mission in Gusaweta, who tried to describe Kilivila from a diachronically oriented point of view by comparing it with Indonesian. We have Malinowski's publications on 'classificatory particles' (Malinowski 1920), on 'the language of magic and gardening' (Malinowski 1935) and on 'the problem of meaning in primitive languages' (Malinowski 1936). There is a translation of parts of the Old and New Testament by McGhee and Dwyer (1949), a Catholic (kind of) catechism (Cunningham 1990), a translation of the Four Gospels and of the New Testament and a translation of 'The Shorter Old Testament and The New Testament' by the United Church missionary Lawton (1979, 1984, 1997), a compilation of Lawton's linguistic studies (Lawton 1993; see Senft 1996c) and an introduction to Kilivila in the *Comparative Austronesian dictionary* (Lawton: 1995, see Senft 1996b). Moreover, a few Kilivila texts are published, both with and without comments and accompanying analyses (Baldwin 1945, 1950, Kasaipwalova 1978, Kasaipwalova and Beier 1978a, b, Hutchins 1980, Leach 1981); and Scoditti has written on Kitava visual

rather complex serial verb constructions (see Senft 1986: 39-42), its marking
of tense/aspect/mood is rather complex and difficult to describe without access
to detailed contextual information (see Senft 1994a), and it seems that the terms
'transitive' and 'intransitive' are basically inadequate for describing the verbal
expression and the argument structure of Kilivila (see Senft 2000a; see also
Mosel and Hovdhaugen 1992: 720ff.).

Moreover, Kilivila has a fourfold series of possessive pronouns, partly real-
ized as free possessive-pronominal-pronouns, partly realized as possessive-
pronominal-affixes. One of these series is produced only in a specific seman-
tic context, referring to food, the other three series are used to distinguish
different degrees of possession; one series marks inalienable possession, two
series mark alienable possession of inedible things (Senft 1986: 47-54). These
possessive-pronominal forms classify the Kilivila noun. Finally, Kilivila is prob-
ably most interesting for linguists because it is a classifier language with a com-
plex system of nominal classification that consists of quantifiers, repeaters and
numeral classifiers proper. I refer to all these formatives within this sophisti-
cated system with the general term Malinowski coined for them, Classificatory
Particles (CP).

The Kilivila system of CPs encompasses at least 177 formatives. I assume that
with all the subtle and very specific differentiations possible, there are probably
more than 200 CPs in Kilivila. Moreover, if we keep in mind all the pragmatic
functions CPs can serve, the Kilivila CP system can even be regarded as a basi-
cally open system. The system of noun classification is an important means
of word formation with all but one of the demonstrative pronouns, with one
form of (numerical) interrogative pronouns/adverbs, with two classes of adjec-
tives and with numerals. These word classes require concord with the class of
the noun they refer to. This concord is secured by the CPs that are infixed or
prefixed to the respective word frame or word stem. I have described the mor-
phology of this system of nominal classification, the functions of the classifier
system, its acquisition, its inventory (produced in actual speech), the processes
of language change that affect the system and the semantics of the Kilivila
classifier system in detail elsewhere (Senft 1996a, 2000a); for the sake of illus-
tration I will present just two sentences containing the four word classes -
i.e. (numerical) interrogative, demonstrative, adjective and numeral -
which are involved in the Kilivila system of noun classification (Senft
1996a: 17f.):

art and poetics (Scoditti 1990, 1996; see also Senft 1993a). For further references to publi-
cations on the language and culture of the Trobriand Islanders see Persson (1999) and Senft
(1986: 155-7, 163-73; 1996a: 355-69). After Malinowski's pioneering research on the Tro-
briands the most important anthropological contributions are Powell (1957) and Weiner (1976,
1988).

(1) *Kevila waga lekotasi?*
     ke-vila   *waga   le-kota-si*
     CP.wooden-how many canoe 3-Past-arrive-Pl
     'How many canoes arrived?'

(2) *Keyu waga makesina kemanabweta (lekotasi)*
     ke-yu   *waga   ma-ke-si-na*
     CP.wooden-two canoe Dem-CP.wooden-Pl-Dem

     ke-manabweta   (le-kota-si)
     CP.wooden-beautiful (3.Past-arrive-Pl)[5]
     'These two beautiful canoes (arrived)'

Here the speakers of these sentences refer to 'canoes'; they have to indicate
the noun class of 'canoe' with the CP for 'wooden things' - '(-)*ke*(-)' - in the
interrogative pronoun, in the numeral, in the demonstrative pronoun and in
the adjective.

   These few remarks suffice for this brief sketch of characteristic features of
the Kilivila language. In one of the examples just presented we notice the use
of demonstrative pronouns that refer to objects in space. This brings us back to
the central topic of this paper, the description of some of the central linguistic
means speakers of Kilivila use in expressing their conceptions of space and for
referring to objects, persons and events in space. In the following I begin by
sketching how specific topological relations are encoded.

6.3   Topological relations

In his examination of grammaticalization processes which led to the develop-
ment of locative expressions (in, on, behind, etc.) in more than 100 Oceanic lan-
guages, Bowden (1992) shows that expressions which are used to describe spa-
tial relationships derive almost exclusively from body-part nouns or from nouns
referring to environmental landmarks such as 'earth' and 'sky'. He emphasizes
at the very beginning of his study that 'locative concepts usually encoded for-
mally by prepositions in English will not normally find their semantic counter-
parts in the languages of other parts of the world' (Bowden 1992: 2). However,
as already noted elsewhere (Senft 1997: 18f.), this observation is nothing new:
Wilhelm von Humboldt (1963 [1822]: 51-2) notes:

[5] The following abbreviations are used: CP - Classificatory Particle; Dem - Demonstrative; Dir -
    Directional; Emph - Emphasis; FoR - Frame of Reference; Fut - Future; incl - inclusive:
    INTR - Intrinsic FoR; Loc - Locative; Past - Past; Pl - Plural; PPII - Possessive pronoun
    series II (indicating a degree of possession intermediate between intimate and more distant
    possession); PPIII-Possessive pronoun series III (indicating a more distant degree of possession):
    PPIV - Possessive pronoun series IV (indicating intimate, inalienable degree of possession):
    Prep - Preposition; REL - Relative FoR; SVC - serial verb construction.

Man kann daher mit Recht bezweifeln, . . . dass es ursprünglich Praepositionen ... im wahren Sinne des Wortes gegeben habe. Alle haben vermuthlich, nach Home Took's richtiger Theorie, ihren Ursprung in wirklichen, Gegenständen bezeichnenden Wörtern.[6]

Moreover, Ray notes in his description of the Baki language published in 1926 that 'some words used as prepositions and adverbs are probably nouns' (Ray 1926: 255); and with respect to compound prepositions in To'aba'ita, Ray (1926: 511) observes that they 'consist of local nouns preceded by the locative prepositions'. A number of grammars of Oceanic languages indeed tend to avoid the term 'preposition', and 'there is no real consensus on which labels should be applied' (Bowden 1992: 3). However, as a general finding we may note that in Oceanic languages many locatives - to use what is probably the most neutral term to describe the functional category[7] - share some characteristics with nouns - especially with nouns that refer to the human body or to body parts. Thus, we find, for example, the adoption of a concept like 'face' to express the locative concept 'front'. These concepts undergo a process of 'grammaticalization'[8] that changes their status from initially being members of open grammatical categories - with less grammatical status - into members of closed-class categories with more grammatical status. With the systems of locatives in Oceanic languages we do not only find that it is the body, but also, e.g., the (parts of the) house, that functions as a source domain (see Bowden 1992: 54-7). Moreover, we also find culturally and geographically determined, and thus non-universal, locative adpositions that express concepts like 'sea', land' and so on (see Senft 1997: 18-22, 24-32).

The general observations with respect to the grammaticalization processes of locatives in Oceanic languages also hold for Kilivila. In Kilivila we find utterances like the following ones (see Senft 1994b, c):

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[6] 'It is highly doubtful . . . that prepositions in the strict sense of the term existed initially. It is quite probable - according to Horne Took's convincing theory - that they have their origin in words that refer to real objects' (my translation (G.S.)).

[7] Bowden (1992: 4) defines the term 'locative' as follows: 'I use "locative" as a functional category. Anything that is used to mark a locative relation, whether it is a noun, adverb, preposition, affix or anything else is called a "locative".' See also Senft (1997: 19).

[8] With the beginning of the 1990s we observe the revival of the classic concept of 'grammaticalization' in linguistics (see, e.g., Heine, Claudi and Hünnemeyer 1991, Traugott and Heine 1991, Hopper and Traugott 1993, Lehmann 1995). The basic idea for this concept came from the British scientist Home Took. Wilhelm von Humboldt refers to him in his discussion of what we now would call 'grammaticalization' processes of words referring to 'real objects' into prepositions (Humboldt 1963 [1822] 51 f.). The term 'grammaticalization' was first coined by Meillet (1912), but - as John Bowden (1992: 6ff.) rightly emphasizes - it is with Kurylowicz (1965) that modern interest in the subject began. Meillet (1912) already claimed that grammatical forms could be traced back either to processes of analogy (e.g. irregular verbs become regular) or to the development of lexical morphemes into grammatical morphemes. In 1965 Kurylowicz defined the concept of 'grammaticalization' as follows: '[Grammaticalization]... consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status' (Kurylowicz 1965: 52). See also Senft (1993b).

(3)   a.   *Gidageda o lopola sena gaga.*
           gidageda o   lopo-la   sena gaga
           pain   in stomach-3.PPIV very bad
           'The pain in her/his stomach is very bad.' (Pain in one's stomach
           is very bad)

      b.   *Gidageda olopola lopola sena gaga,*
           gidageda olopola lopo-la   sena gaga
           pain   in(side) stomach-3.PPIV very bad
           'Pain in one's stomach is very bad.' (Stomach ache is very bad)

      c.   *Minana dikwakwekula olopola boteli esisu.*
           Mi-na-na   dikwakwekula olopola boteli e-sisu
           Dem-CP.animal-Dem frog   in(side) bottle 3.-be
           'This frog is inside the bottle.'

In these examples we find the locatives *o* (in) and *olopola* ('in', 'inside'), and
with this latter locative we observe the interesting phenomenon of grammatical-
ization mentioned above. This process affects the locative *o*[9] and the body-part
term *lopo-la* ('stomach') that obligatorily needs a possessive pronominal suffix
indicating an intimate degree of possession. As mentioned in Section 6.2 above,
there is a fourfold series of possessive pronouns in Kilivila. I refer to the series
of pronouns that are suffixed to most of the body-part terms (see Senft 1998a)
as 'possessive pronouns IV and abbreviate this expression as 'PPIV. Thus, the
locative *olopola* diachronically comes from 'Loc-stomach'. Like many other
Oceanic languages, Kilivila grammaticalizes body-part terms (see Senft 1986:
88-91) into locatives:

odabala	'on, on top (of)'
	(<Loc->daba-PPIV - *head, forehead, brain)*
okopo 'ula	'behind, back, behind him/her'
	(<Loc->kapo'u-PPIV - *back)*
olopola	'in, inside (of), in the middle (of)'
	(<Loc->lopo-PPIV- *belly*, *windpipe*, *innards)*
omatala	'in front (of), before, before him/her'
	(<Loc->mata-PPIV - *eye)*
ovadola	'on, on top (of), on the surface (of), at the mouth/ opening (of)'
	(<Loc->vado-PPIV - *mouth)*
okanivala	'at the side (of) (a person only)'
	(<Loc->kaniva-PPIV - *hip)*
okepapala	'near, close by, beside, at the side (of)'
	(<Loc->kepapa-PPIV - *side, flank)*

[9] This locative can also be classified as a preposition (see Senft 1986: 93, 1994b, c).

We also find the following grammaticalized forms to express the concepts 'left' and 'right':

> *okakata*   'on the left-hand side, on the left'
> (<Prep->kakata - *left, left-hand side),*
> *okikivama*   'on the right-hand side, on the right'
> (<Prep->kikivama- *right, right-hand side).*

With these expressions (as well as with some other locatives that grammaticalize terms other than body-part terms into locatives) we are confronted with a quite complex problem of syntactic classification (see Senft 1986: 90ff.).

   The expressions classified as 'locatives' can also function (and be classified) as both 'prepositions' and 'adverbs of place'. On the other hand, many Kilivila adverbs of place, like, e.g., *olakeva* ('on top of, above, up, in the sky, over'), also serve the function of prepositions or locatives, according to their specific function in the sentence.

   Moreover, expressions like *omatala* - ('in front of (his/her eyes)'), *ovadola* ('on, on top of, on the surface of, at the mouth (opening) of (her/him)') and so on can also be classified syntactically as local adverbials consisting of a prepositional phrase with the preposition/locative *o* ('in, into, to') and the noun *mata-la* ('eye, her/his eye') and *vado-la* ('mouth, her/his mouth').

   With all these constructions, the form with the suffix *'-la'* always has a neutral meaning, besides the expression of third person singular as its referential function. Thus, we have, e.g.,

> *omatala*   'in front (of), before' (neutral meaning),
> and
> *omata-la* 'in front of her/him' (referential function)
> - (compare here: *omata-gu*   'in front of me'
>   *omata-m*   'in front of you', etc) -

besides the prepositional phrase

> *omatala* 'in front of her/his eyes'
> (the forms *omatala/o matala* must be parsed as *o(-)mata-la* in(-)
> eye-3.PPIV).

These variants shed some light on the stages of the grammaticalization processes: it may well be that the prepositional phrase

> *o*   *mata-la*
> Loc eye-3.PPIV
> 'in front of her/his eyes'

was first grammaticalized into the expression

> *omata-la*
> in front of-3.PPIV
> 'in front of her/him' (referential function),

which was then grammaticalized into the locative/preposition/local adverb

> *omatala*
> 'in front (of), before' (neutral meaning).

To finish this brief discussion of grammaticalization processes that affect the locative and nouns like body-part terms 'o', it should be noted that body-part terms like *mata-PPIV* can also be used metaphorically, as illustrated in the following question:

(4) *Matala makena kai ambeya*
     mata-la   ma-ke-na   kai   ambeya
     eye-his/her Dem-CP.wood/rigid-Dem stick where
     'The tip of this stick where (is it)'

     emwa yokwa?
     e-mwa   yokwa
     3.-come to you?
     'does it come to you?'

In this sentence the consultant asked for some information about a certain direction. To indicate directions and/or locations, Trobriand Islanders have to decide whether (i) they want to specify the goal or location with a personal or place name, or whether (ii) they want to specify the goal or location as a specific place, but without a place name or proper name, or whether (iii) they want to refer to the goal or location (or to the general direction where this goal or location is) with a general term. If they can, and want to, refer to the goal or location with a place or a proper name, they do not use any locative whatsoever:

(5) *Bala Losuia*
     Ba-la   Losuia
     l.Fut-go Losuia
     'I will go to Losuia (name of a village).'

If they want to refer to the goal or location with a more specific term or if they want to refer to a specified place at the destination of a motion event, they use the locative *o* - which functions comparably to a definite article, i.e. the locative incorporates a feature of definiteness for the governed noun phrase.

(6)   *Bala o buyagu*
        Ba-la   o   buyagu
        l.Fut-go Loc garden
        'I will go to the garden.' (i.e. my personal, specific garden plot)

If they want to refer to the goal or location with its most general term, or if they want to refer to the general direction in which this goal or location is, or if they want to refer to an unspecified place at the destination of a motion event, they use the directional *va:*

(7)   *Bala va bagula*
        ba-la   va bagula
        l.Fut-go Dir garden
        'I will go to the garden.' (general, unspecified expression for 'garden')

However, these rules do not hold for goals or locations that are body parts. If the goal or location is a body part, the speakers seem to take it as something more specified and thus use the locative *o* again (as illustrated in (3a) above).

   The Kilivila system of locatives[10] allows its speakers to clearly distinguish, and refer to, topological relations. However, to make such a reference as idiomatic and unequivocal as possible, positional and sometimes also motion verbs are used together with the respective locatives. In what follows a few examples for such spatial references are presented. They were elicited with the 'Topological Relations Picture Series' (TRPS; see Chapter 1, §1.4.1). The first of the following examples (9a-g) illustrates the variety of responses elicited from my consultants. With the question:

(8)   *Ambe panikeni?*
        where cup
        'Where's the cup?'

which I asked presenting Picture 1 (cup on table), I elicited responses such as the following:

(9)   a. *Odabala*
           'On top'

        b. *Odabala   tebeli*
           on top (of) table
           'On top of the table'

        c. *O   tebeli*
           Loc table
           'On the table'

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[10] For the full list of (grammaticalized) locatives see Senft (1986: 88-91, 93).

    d. *Odabala tebeli ekanukwenu*
       odabalatebeli   e-kanukwenu
       on top (of)   table   3.-rest
       'It rests on top of the table'

    e. *Panikeni o   tebeli o   dabala   etota*
       panikeni o   tebeli o   daba-la   e-tota
       cup   Loc table Loc head-3.PPIV 3.-stand
       'The cup is standing on the table, on its top'

    f. *Makwelana panikeni o tebeli etota*
       ma-kwela-na   panikeni o   tebeli e-tota
       Dem-CP.potlike-Dem cup   Loc table 3.-stand
       'This cup is standing on the table'

The following examples present just one typical response of the consultants to pictures from the TRPS. Picture 2 (apple in bowl) elicited responses such as

(10)   *Bovada olopola kwena ekanukwenu*
       bovada   olopola kwena e-kanukwenu
       pumpkin inside   pot   3.-rest
       'The pumpkin (there are no apples on the Trobriands) rests (lies) inside
       the pot'

Picture 3 (stamp on letter) elicited responses such as

(11)   *Miyana leta ekausi stampa epakisi otapwala*
       mi-ya-na   leta   e-kau-si   stampa e-paki-si   otapwala
       Dem-CP.flexible-Dem letter 3.-take-Pl stamp   3.-glue-Pl at the side
       'They take this letter and glue a stamp on its side'[11]

Picture 10 (ring on finger) elicited responses such as

(12)   *Bida esela o imitabola*
       bida esela o   imitabo-la
       bead 3.-put Loc finger-3.PPIV
       'The bead (ring) is put on her finger'

Picture 13 (lamp over a table) elicited responses such as

(13)   *Lampa olakeva tebeli esoya*
       lampa olakeva tebeli esoya
       lamp over   table 3.-hang
       'The lamp is hanging over the table'

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[11] It seems that the locative *otapwala* is not the result of a grammaticalization process that affected a body-part term; but again I cannot present sound information with respect to its derivational morphology.

Picture 16 elicited responses such as

(14)   *Manakwa boli osukwavela sea ekanukwenu*
         ma-na-kwa   boli osukwavela sea   e-kanukwenu
         Dem-Dem-CP.thing ball under(neath) chair 3.-rest
         'This ball rests (lies) under a chair'

The locative *osukwavela* seems to be the result of a grammaticalization process that affected the (general) locative *o* and the expression *sukwava* which refers to the space between the floor of a Trobriand house and the ground; most houses on the Trobriands are built on stilts.

   The pictures 30 (arrow in/through apple) and 70 (apple on a skewer) elicited very similar responses, like, for example:

(15)   a. *Ebabisi o keyala*
            e-babi-si   o   keyala
            3.-spear-Pl Loc   spear
            'They spear it (it is) on the spear'

However, here consultants also responded with answers that avoid locatives by expressing the spatial relation just with a series of verbs, as in

(15)   b. *Ekausi keyala esuvisi miyana bovada ebasisi*
            e-kau-si   keyala   e-suvi-si   mi-ya-na
            3.-take-Pl spear   3.-enter-Pl Dem-CP.flexible-Dem
            bovada   e-basi -si
            pumpkin   3.-stab -Pl
            'They take a spear, they enter this pumpkin (with it) they spear (it)'

Both these reactions to the pictures presented in this elicitation test are perfect answers in Kilivila. Example (15b) documents rather strikingly the important role of verbs in spatial reference. In many of the responses elicited with the TRPS, the consultants produced locatives together with positionals (see, e.g., (9d-f)) and motion and action verbs, which specify the manner and other characteristic features of the topological relation depicted in the pictures. However, the most natural reaction to the simple elicitation question 'Where is X?' (see (8) above) were elliptic utterances (as illustrated in (9a-c) above). The positionals most often elicited are *-sisu-* ('to be, to exist, to live'), *-kanukwenu-* ('to rest, to lie down'), *-tota-* ('to stand') and *-soya-* ('to hang'). The first three of these positionals were produced interchangeably (see (9d-f) above) for referring to a great variety of scenes,[12] but the verbal expression *-soya-* was produced to refer

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[12] I presented eighty stimuli to my informants (stimuli like the picture showing 'mustard on sausage' could not be used, because the depicted concept is unknown to the Trobrianders). In what follows I present the three positionals *-sisu-, -kanukwenu-* and *-tota-* and the number

to 'hanging' scenes only. These positionals seem to represent core members of the class of Kilivila positionals, though we also find more specific positionals produced here (as well as in other elicitation tasks (Senft 1994b: 62)), like, for example, *-kokeva-* ('to be at sea'). In twenty-two cases the consultants produced positionals together with action verbs like *-sipu-* ('to tie'), *-sagi-* ('to stick'), *-sela-* ('to put') and *-karopusagi-* ('to spear'), and in a few cases the consultants also produced the motion verbs *-sakaula-* ('to run'), *-suvi-* ('to enter'), *-mwena-* ('to climb'), *-rekukwa-* ('to swing') and *-you-* ('to fly'). As illustrated above ((11), (15b)) there are a few cases where some of the consultants did not produce positionals at all but action verbs. In most of these cases the scenes used for elicitation depicted spearing actions and adornments. However, here the informants' reactions are not systematic, either. To summarize, positionals - sometimes produced in combination with action and motion verbs - seem to play a crucial role for topological reference in Kilivila. The next section presents and describes some of the basic motion verbs and their function in Kilivila motion descriptions.

6.4   Motion

As pointed out elsewhere (Senft 1999b, 2000b) there are a number of proposals in the linguistic literature for defining motion verbs and, more generally, for defining how motion events are linguistically coded. However, so far we do not have a general - notional - definition of motion verbs in linguistics. Lucy (1994) points out that it is far from clear whether what we notionally call 'motion verbs' correspond to a formally defined verb class in any given language.[13] For the purposes pursued here it should suffice to state that - despite this linguistic problem - speakers of any language talk about motion events and that their languages offer them the verbal means to do so. Although Miller and Johnson-Laird (1976: 529) point out that we have (at least) to differentiate between 'verbs of motion-in-place' and 'verbs of locomotion', I assume the commonsense argument that all the verbal expressions or verbs speakers use in their languages to refer to motion and locomotion events can - at least pretheoretically and, of course, notionally - be regarded as being motion verbs. Thus, by 'motion verb', all that is meant here is verbs that refer to what we would commonsensically call motion - as far as I know these verbs do not form a coherent minor form class by any morphosyntactic criteria (see Senft 1999b).

of stimuli for which they were produced alone and interchangeably: *-sisu-* (2), *-tota-* (6). *-kanukwenu-* (16), *-sisu- / -kanukwenu- / -tota-* (14). *-sisu- / -kanukwenu-* (18), *-sisu - / -tota-* (9), *-kanukwenu- / -tota -* (9).

[13]   I have discussed this problem in detail elsewhere (Senft 2000). See also Wilkins and Hill (1995).

To introduce the description of motion it will be best to begin with a text fragment that I elicited from my consultants using four pictures from the picture storybook *Frog, where are you?* by Mercer Mayer (1969: Pictures 15-18). In what follows, Ilakelava, a middle-aged woman, tells the young girl Ilaketukwa the 'Frog Story'.[14]

(16)   Picture 15

Eweki dia o . .. odabala koya

e-weki   dia   o   odabala koya

3.-go.and.rush.to deer Loc on top of mountain

'She goes and rushes to the deer on ... on top of the mountain'

Isila o kayola isakauvali

i-sila o   kayo-la   isakauvali

3.-sit Loc neck-3.PPIV 3.-run.with

'She sits on its neck, it runs with (her)'

(17)   Picture 16

Isakauvali itobusiya imweya

isakauvali i-tobusiya   i-mweya

3.-run.with 3.-climb.down 3.-take.away

'It runs with (her) it climbs down it takes (her) away',

itobusiya imweya va keda

i-tobusiya   i-mweya   va   keda

3.-climb.down 3.-take.away Loc street

'it climbs down it brings (her) to the street',

esakauvali bilau

esakauvali   bi-lau

3.-run.with   3.Fut-take.away

'it runs with (her) it will take (her) away (without consent)'

(18)   Picture 17

Isakauvaliwa ivilobusiya, ikapusi, m,

isakauvali-wa   i-vilobusiya i-kapusi m

3.-run.with-only 3.-come.out 3.-fall   hm

'It runs with (her) it comes out, it falls, hm',

mtona gwadi, ikanava va vaya kena

m-to-na   gwadi i-kanava   va   vaya kena

Dem-CP.human-Dem child   3.-lie.down Loc river or

'this child, it lies down in the river or'

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[14] Like many other consultants, Ilakelava substitutes the little boy presented in the pictures with her listener, a girl. Thus, she refers to the (male) protagonist of the story with Ilaketukwa's name - just to make the story more interesting for the little girl and to capture her attention.

ilala o bwalita
i-la-la   o   bwalita
3.-go-Emph Loc sea
'it goes indeed (in)to the sea'

(19)   Picture 18
Ikapusi ila o bwalita e ikokuva,
i-kapusi i-la   o   bwalita e   i-kokuva
3.-fall   3.-go Loc sea   and 3.-dive
'She falls she goes to the sea and she dives',

minana ivekeyawa. Ikapusi
mi-na-na   i-vekeya-wa   i-kapusi
Dem-CP.animal-Dem 3.-go.and.follow-only 3.-fall
'this animal it goes and follows (her). She falls'

mtona Ilaketukwa e ilawa olopola
m-to-na   Ilaketukwa e   i-la-wa   olopola
Dem-CP.human-Dem Ilaketukwa and 3.-go-only inside
'this Ilaketukwa, and she goes inside'

bwalita ikapusi. Dia leva, isila o kayola.
bwalita i-kapusi dia le-va   i-sila o   kayo-la
sea   3.-fall   deer 3.Past-go to 3.-sit Loc neck-3.PPIV
'the sea, she falls. The deer came to (this place), she sat on its neck'

This relatively brief excerpt from my corpus of 'Frog Stories' illustrates that Kilivila does not only have a large number of motion verbs but that it also uses these verbal expressions in more or less complex serial verb constructions (see Senft 1986: 39-42, 1999b). I do not have any formal evidence for subdividing the Kilivila motion verbs into subclasses; however, a closer look at these verbs shows that answers to the following questions are basic for the differentiation of motion verbs and thus are central for an adequate lexical semantic description of these expressions:[15]

- Is the source and/or the path and/or the destination of the motion known or not?
- Is the motion oriented towards, or away from, the speaker?
- Is the motion the speaker refers to deictically anchored in the speaker?
- Is the place of the speaker at the destination of the motion or not?
- Is the destination of the motion another place or another person than the speaker and her or his place?
- Does the motion start or is it completed?

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[15] Most of these questions are also relevant for Talmy's (1975) definition of the 'motion situation' with its central subconcepts of 'figure, ground, path', and 'motion'. See also Talmy (1991) and Aske (1989).

- Is the motion on the horizontal or on the vertical plane?
- Is the manner of the motion encoded in the verbal expression?

On the basis of such considerations I have described a subset of motion verbs in Kilivila that express the concepts 'come', 'go', 'enter' and 'exit' in detail elsewhere (Senft 1999b, 2000b). Here I want to give just two of these descriptions, the description of the motion verb *-la-* (see example (18) above), and the description of the motion verb *-ma-* (see examples (26) and (27) below).

The verbal expression *-la-* is used to refer to all kinds of motion events that are directed away from the speaker; this implies, of course, that the place of the speaker is not at the destination of the motion. The motion event itself can, but need not, be deictically anchored in the speaker. Source, path and destination of the motion may or may not be known. We can gloss this motion verb as 'to go' .[16] For all motion verbs expressing 'motion away from the speaker' it is crucial whether and how information with respect to source, path and destination of the motion is encoded.

The verbal expression *-ma-* is used by speakers to refer to motion towards the speaker. Source, path and destination of the motion may or may not be known to the speaker. The speaker's place may or may not be at the destination of the motion referred to. The expression can be glossed as 'to come'. For all motion verbs expressing 'motion towards the speaker' it is crucial whether and how information with respect to source, path, destination and speaker's place at the destination is encoded (for detailed analyses see Senft 1999b, 2000b).

As the examples presented in (16)—(19) above show, there are also verbal expressions that indicate the manner of the motion, such as, e.g., the verb *-weki-* ('to go and rush to' (this verb also expresses reference to a specified destination)); we observe verbs that lexicalize the fact that the motion of an actor also involves someone (or something) else, such as, e.g., the expressions *-sakauvali-* ('to run with') and *-vekeya-* ('to go and follow'), and verbs that mark motion in the horizontal and the vertical plane, such as, e.g., the expressions *-vilobusi-* ('to come out (of something on the horizontal plane)'), *-tobusiya-* ('to climb down'), and -kapusi- ('to fall'). We also find a number of verbs in Kilivila (which are not represented in the examples given above) that express complex notions such as, e.g., *-vabusi-* ('to go down to the beach'), *-valagua-* ('to go up to the village'), etc.

Moreover, as already mentioned above, Kilivila uses (rather complex) serial verb constructions (from here onwards abbreviated as SVC) for reporting

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[16] Compare Deborah Hill's description of *la* ('go, travel') and *la hou* ('go away from deictic centre') for the Austronesian language Longgu that is spoken on Guadalcanal, Solomon Islands, in Wilkins and Hill (1995: 231ff.).

complex motion events. In (17) above Ilakelava uses three SVCs to describe the motion of the deer with the child on its back in her interpretation of Picture 16: *isakauvali itobusiya imweya* … ('It runs with (her) it climbs down it takes (her) away'), *itobusiya imweya...* ('it climbs down it takes her away'),... *.esakauvali bilau* ('it runs with (her) it will take (her) away without consent'). In (18) she starts her description of Picture 17 with the SVC *Isakauvaliwa ivilobusiya . ..* ('It runs with (her) it comes out...') that refers to the motion of the deer,[17] and in (19) Ilakelava describes the protagonist's falling depicted in Picture 18 with the SVC *Ikapusi ila....* ('She falls she goes....') with the specification of the location *o bwalita* ('to the sea'). These SVCs are frequently used in descriptions of motion events. Similarly, referring very idiomatically to the fact that a man is entering a house, one of my consultants produced the following sentence (see Senft 1999b):

(20)   *Etota va doa e bisuvi bila va bwala e biloki tebeli manakwa etota*
         e-tota   va   doa   e   bisuvi   bi-la   va   bwala
         3.-stand Loc door and 3.Fut-enter 3.Fut-go Loc house
         'He stands in the direction of the door and he will enter he will go
         into the house'

         e   bi-loki   tebeli ma-na-kwa   e-tota
         and 3.Fut-walk.arrive table Dem-Dem-CP.general 3.-stand
         'and he will walk and arrive[18] at this table and he stands (there)'

In this utterance the speaker refers with the SVC *bisuvi bila* ('he will enter he will go)' and the specification of the location *va bwala* (into the house') to the act of entering a house. Note that he also starts and finishes his utterance with the positional *etota* ('he stands'); in Kilivila motion event reports are often accompanied by positionals that express the initial and/or final state of the action.[19] The manner of the movement 'entering going' is encoded in the SVC.

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[17] Note that the verb that follows this serial construction - namely *ikapusi* refers to the child that is falling; the fact that the SVC consists of only the first two verbs (that refer to the motion of the deer) in this utterance is also marked by the speaker with a brief pause after the second verb of the serial construction. For an excellent survey on the state of the art in the description and analysis of SVCs see Durie (1997); for the role of pauses in SVCs see Givón (1990).

[18] The verbal expression *-loki-* used in this sentence can be defined as follows: *-loki-* refers to motion away from the speaker. The focus of this expression is on the completion of the motion, or the arrival of the object or person moving away from the speaker. It implies that the action of the motion away from the speaker is completed and that the destination of the motion is known. The motion event the speaker refers to can. but need not, be deictically anchored in the speaker. Information about the source and the path of the motion may or may not be known to the speaker. The expression can be glossed as 'to go/walk and arrive (at a known destination)' (see Senft 2000).

[19] I have already emphasized the important role of verbal expressions in all kinds of spatial reference at the end of Section 6.3 where I discussed the expression of topological relations in Kilivila.

To describe different ways of entering a house, a Trobriand Islander would produce utterances like, for example, the following ones:

(21)   a. *Esuvi esakaula olopola bwala*
          e-suvi   esakaula o   la   bwala
          3.-enter 3.-run   Loc 3.PPIII house
          'He enters he runs into his house.' (He is entering running into his house)

        b. *Esuvi ekavagina o la bwala*
          e-suvi   e-kavagina o   la   bwala
          3.-enter 3.-crawl   Loc 3.PPIII house
          'He enters he crawls into his house.' (He is entering crawling into his house)

        c. *Esuvi epela o la bwala*
          e-suvi   e-pela   o   la   bwala
          3.-enter 3.-jump   Loc 3.PPIII house
          'He enters he jumps into his house.' (He is entering jumping into his house)[20]

These examples illustrate that, besides the two lexicalization patterns for manner-of-motion events that Talmy (1985, 1991) classifies and defines as 'satellite-framed constructions' and 'verb-framed constructions', there is also a third type of lexicalization pattern that is represented by SVC languages like Kilivila (see Crowley 1987, Pawley 1987, 1993, Durie 1997; also Slobin and Hoiting 1994, Slobin 1998: 3). With this observation I conclude this brief discussion of some basic motion verbs and their function in Kilivila motion descriptions. I will finish my prolegomena to a Kilivila grammar of space with a discussion of what frames of spatial reference are preferred by speakers of Kilivila.

6.5   Frames of reference

Our results in researching the interrelationship between language, cognition and the conceptualization of space in various languages have shown that we find three frames of spatial reference, the 'relative', 'absolute' and the 'intrinsic' frame of reference (from here onwards abbreviated as 'FoR' (see Senft 1994d, Levinson 1996a: 359, 365-73, 1996b, Pederson et al. 1998; see also

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[20] Crowley (1987: 42) points out that 'the verbs that are most frequently encountered in serial constructions in languages of the world are the basic motion verbs (e.g. 'come', 'go'), which are followed by other active intransitive verbs (e.g. wander, disappear, crawl) and intransitive posture verbs (e.g. 'stand, lie'), followed by any other active intransitive verbs (e.g. 'go hunting', 'speak', 'jump', etc.), and finally followed by the class of transitive verbs, which are therefore the verbs that are least liable to enter into serial constructions with other verbs.

Bühler 1934)). These FoR differ with respect to how angles are projected from the 'ground' in order to situate the location of the 'figure' that is referred to (Talmy 1978: 627; see also Senft 1997: 10). Speakers of Kilivila can utilize all these three FoR for verbal spatial references. However, they show rather clear preferences for certain FoR in certain contexts for certain functions, for certain means and ends. Thus, Trobriand Islanders prefer the intrinsic FoR for referring to the *location* of objects with respect to each other in a given spatial configuration - especially if these objects themselves have inherent intrinsic features. The use of the relative FoR is also possible here, but only rarely observed. However, in referring to the spatial *orientation* of objects in a given spatial configuration, Kilivila speakers clearly prefer an absolute ad hoc landmark FoR. Moreover, speakers also use the deictic system for referring both to the location and to the orientation of objects in space. Finally, the Kilivila expressions for 'left/right/front/back' have both intrinsic and relative interpretations; the respective reading is usually grammatically marked by possession. In what follows I will try to illustrate this finding with some typical examples from my corpus of spatial reference in Kilivila.[21]

With the Men and Tree Game[22] I obtained the following descriptions of Photo 2.3, Photo 2.4 and Photo 2.5 from my consultants:

(22)   Photo 2.3
         E labani mtona tau kaitukwa o kakata eyosi kai omatala e yamala gala
         kweyata bagisi

         e   la-bani   m-to-na   tau   kaitukwa   o
         and 1.Past-find Dem-CP.man-Dem man   walking-stick Loc
         'And I found this man, (a) walking-stick in'

         kakata e-yosi kai omata-la   e   yama-la
         right 3.-hold tree in.front.of-3.PPIV and hand-3.PPIV
         '(his) right (hand) he is holding (it), (the) tree (is) in front of him and his hand'

         yama-lagala kweya-ta ba-gisi
         hand-3.PPIV not CP.limb-one l.Fut-see
         'one of his hands I cannot see'

Only the first four of the following examples are taken from the Men and Tree photo-matching task. This task was certainly not ideal for the Trobriand Islanders (see Wilkins and Senft 1994. Senft 1998b) because of various methodological and cultural reasons (see also Nüse 1996:91 f.). Moreover, it goes without saying that if we want to come up with generalizations about the use of FoRs in a certain language we have to zoom in from the abstract, general macro-perspective on to the micro-perspective and look as carefully as possible at the whole range of rich empirical data we have gathered so far (see Senft 1998b).

This game was developed to elicit verbal spatial reference to relationships in the horizontal plane between two unfeatured objects (balls) and between a featured object (a man) and a non-featured object (a tree). See Pederson et al. (1998).

(23)   Photo 2.4

E tetala tau kai otubulola e kaitukwa eyosi o kakata

e   te-tala   tau kai otubulo-la   e   kaitukwa

and CP.man-one man tree at.back-3.PPIV and walking-stick

e-yosi   o   kakata

3.-hold Loc right

'And one man, (a) tree at his back, and he is holding (a) walking stick in (his) right hand)'

(24)   Photo 2.5

E teyuvela kaitukwa o kakata kai omatala

e   te-yuvela   kaitukwa   o   kakata

and CP.man-again walking-stick Loc right

kai   omata-la

tree   in.front.of-3.PPIV

'And (a) man again, (a) walking stick in (his) right, (a) tree in front of him'

In these three descriptions the consultants use only the intrinsic FoR to refer to the location of the two objects with respect to each other in the spatial configuration depicted in these photos. Photo 2.3 is differentiated from Photo 2.5 by mentioning that one of the man's hands cannot be seen. What is odd here is that the consultants use neither the left/right distinction in the relative FoR nor any other means to present information with respect to the spatial orientation of the two objects depicted in the photographs. Thus, an analysis of just these three descriptions would be based on what are most probably elicitation artefacts and thus would lead to a completely wrong picture with respect to what frames of reference the Trobriand Islanders use and how they use them. Therefore the following examples are presented to document that speakers can give much more sophisticated spatial descriptions than those used in referring to Photos 2.3, 2.4 and 2.5. To describe Photo 2.8 in the very same elicitation tool, the consultants produced utterances like the following:

(25)   Photo 2.8

Kweyuvela teta tomwota labani, kai o

kwe-yuvela   te-ta   tomwota la-bani   kai o

CP.thing-again CP.man-one person   1.Past-find tree Loc

'A thing again, one person I found, (a) tree at'

kakata, kaitukwa   o   kakata kai, o   la

kakata kaitukwa   o   kakata kai o   la

right   walking.stick Loc right   tree Loc 3.PPIV

'(the) right, (a) walking stick at (the) right, (a) tree at his'

kakata wa,   e   matala   esema
kakata wa   e   mata-la   esema
right   only and eye-3.PPIV 3.-come.towards.speaker
'right only, and his eyes look at me'

In this example the speaker again uses the intrinsic FoR to describe the location of the two objects with respect to each other in the spatial configuration depicted in the photo. He first uses the expression for 'right', *kakata,* without any further specification; however, the speaker then clearly marks the chosen (intrinsic) FoR with the possessive pronoun (here: *la).* Moreover, he also uses the deictic system to refer to the orientation of the little man in this configuration in the utterance… *e matala esema* ('… and his eyes look at me'). In general, speakers of Kilivila use an absolute ad hoc landmark system to describe the orientation of objects in spatial configurations. I will illustrate this with an excerpt from the description of a body pose which was elicited with another game (the 'wooden man game'):[23]

(26)   *Mtona . . . esakaula .. . Ekatupi kikivama*
        m-to-na   esakaula e-katupi kikivama
        Dem-CP.man-Dem 3.-run .. . 3.fold   left
        'This man is running,… He is folding the left (leg)' ('his leg' was mentioned before)

        evayumali ekatupwi edodoga, eva olakeva
        e-vayumali e-katupwi e-dodoga   e-va   olakeva
        3.-be.behind 3.-fold   3.-be crooked 3.-go.to up
        'it is behind, he is folding it, it is crooked, it goes up'

        pikekita wa. E vovola edodoga, ema o
        pikekita wa e   vovo-la   e-dodoga   e-ma   o
        little   only and body-3.PPIV 3.-be.crooked 3.-come Loc
        'only somewhat. And his body is crooked, it comes to'

        valu, yamala kikivama ekatupiwa eyosali emwa
        valu   yama-la   kikivama e-katupiwa e-yosali e-mwa
        village hand-3.PPIV left   3.-fold   3.-raise 3.-come to
        'the village, his left hand he is folding he is raising (it) it comes'

[23] In this game the 'director' had to describe body poses which he got either in photos or with a wooden artist's statuette with flexible joints. On the basis of these descriptions the 'matcher' had to adjust his or her statuette in such a way that the resulting body poses matched the director's description.

> *o valu, kakata ebiyumali. . .*
> *o   valu   kakata e-biyumali*
> Loc village   right   3.-pull.back
> 'to the village, (the) right (hand) he is pulling it back'

In this description we find an ad hoc landmark in the reference *o valu* ('to the village'); moreover, the possessive pronouns clearly mark the use of 'left' and 'right' as being part of the intrinsic system. On the basis of the possessive pronouns the hearer can decide whether 'left/right' references are made within the relative or within the intrinsic frame of reference. The following example illustrates how the pronouns distinguish intrinsic from relative left and right. This example is taken from one of our route description games:[24]

(27)   *E elola ema esuvila*
         E   e-lola   e-ma   e-suvi-la
         And 3.-walk 3.-come 3.-enter-Emph
         'And he is walking, he is coming, he is entering indeed (the path)'

> *o la kakata o dakikivamasi.. .*
> *o   la   kakata o   da-kikivama-si...*
> Loc 3.PPIV   right   Loc 1 .incl.PPIV-left-Pl
> 'at his right (INTR), at our left (REL)'

Finally, I want to briefly comment on the Kilivila absolute ad hoc landmark system. My corpus of spatial references documents the consultants' use of ad hoc landmarks like *laodila* ('bush'), *kwadeva* ('beach'), *bwalita* ('sea'), *valu* ('village'), *Tuyabwau* (name of a freshwater well), *pilakeva* ('topside, landside'), *pilitinava* ('lowland, seaside, beachside'), etc. - generally in connection with the locative *o.* Among these ad hoc landmarks we do not only find names of wells, beaches, reefs, rocks, or trees,[25] but also - depending on the context and situation, of course - references to houses and their respective owners and even to people that are sitting in the respective direction. These axes of orientation are indeed created on the spot in a very ad hoc manner, and they may refer to landmarks both within a large- and a small-scale environment, like, for example, the general environment or marks on the set of the space games. The variability with respect to the choice, and in the creation of, such axes is rather high; the only constraint seems to be that the addressee either can see

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[24] In these interactional games, directors had to describe certain routes in a miniature landscape in such a way that the matchers could have a small figure walk along the described paths.

[25] For many of these named wells, beaches, reefs and rocks the Trobriand Islanders have mythical stories. Malinowski (1922: 298) has already noted that for them 'the landscape represent(s) a continuous story'. On the Trobriands, as in many other cultures, environment and mythology are intertwined and form specific means for spatial reference (see Downs and Stea 1977: 138; see also Malinowski 1922: 330). For such a myth on the Trobriands that deals with petrified canoes, see Senft 1995.

or knows of the landmarks chosen. All these axes are used as frequently as the bush-sea or bush-shore axis and therefore I would rather not assign a special status to the latter axis - although this land-sea axis features rather prominently in many other (and not only Austronesian) languages (see Senft 1997). The following two examples illustrate this use of ad hoc landmarks for describing the orientation of objects in space. They were elicited in the Tinkertoy matching game (Senft 1994b)[26] and in one of the Route Direction games (Senft 2000b).

(28)   *Ka, manakwa vavagi mna kwegulini*
     ka   ma-na-kwa   vavagi mna kwe-gulini
     look Dem-Dem-CP.inanimate thing   well CPinanimate-green
     'Look, this thing, well, the green'

     kwekekita eselisi, matala
     kwe-kekita   e-seli-si   mata-la
     CP.inanimate-small 3.-put-Pl eye-3.PPIV
     'small thing they put there, its tip (eye)'

     ela o bwalita kabulatala, kabulatala ela o laodila
     e-la   o   bwalita kabula-tala kabula-tala e-la   o   laodila
     3.-go Loc sea   CP.half-one CPhalf-one 3.-go Loc bush
     'it goes to the sea, one half, the other half goes to the bush'

Here the land-sea axis functions as an ad hoc landmark. In the next example, the name of a freshwater well and the location of a house (which is referred to only by the name of its owner) serve the same function:

(29)   *E makadana keda o la o la kakata . . •*
     E   ma-kada-na   keda o   la   o   la
     Yes Dem-CP.path-Dem path Loc 3.PPIV Loc 3.PPIV
     'Yes, this path at his at his'

     kakata ... Eva kona wa eva'ila makala
     kakata ... e   va   kona   wa   e-va 'ila makala
     right...   and Loc corner only 3.- turn like
     'right. .. (INTR) And at the corner only he is turning as if

     bila Tuyabwau, eva gala ila va kona
     bi-la   Tuyabwau   e-va   gala i-la   va   kona
     3.Fut-go Tuyabwau.well 3.-go to not   3.-go Loc corner
     'he will go to the Tuyabwau freshwater well, he does not go there,
     he goes to the (next) corner,'

  Tinkertoy is an American construction toy system with which one can build representational and non-representational constructions in three-dimensional space. This system was used to elicit caused motion. See Senft (1994b).

> *eva 'ila bila beya Kalavatu*
> e-va'ila bila   beya Kalavatu
> 3.-turn 3.Fut-go there Kalavatu
> 'he turns and he will go to there (where) Kalavatu (i.e. Kalavatu's house) (is)'

In summary, speakers of Kilivila prefer the intrinsic FoR for describing the location of objects with respect to each other in spatial configurations, and they prefer an absolute ad hoc landmark FoR system for referring to the spatial orientation of objects in space, and for motion paths. Moreover, they may also use the relative system for spatial reference, but this is rather rare.

6.6   Summary and concluding remarks

This chapter has described how speakers of Kilivila encode specific topological relations, how they refer to motion events and what frames of spatial reference (FoR) they prefer in what contexts and for what purposes.

We saw that the Kilivila system of locatives allows its speakers to clearly distinguish, and refer to, topological relations. Most of these locatives can also function as prepositions and as adverbs of place, and they have grammaticalized not only from body-part terms but also from other terms. To refer to topological relations as idiomatically and unequivocally as possible, positionals and sometimes also motion verbs are used together with the respective locatives. The positionals that were most often elicited with the 'Topological Relations Picture Series' are *-sisu-* ('to be, to exist, to live'), *-kanukwenu-* ('to rest, to lie down'), *-tota-* ('to stand') and *-soya-* ('to hang'). The first three of these positionals were produced interchangeably for referring to a great variety of scenes, but the verbal expression *-soya-* was produced to refer to 'hanging' -scenes only. These positionals seem to be core members of the class of Kilivila positionals, though we also find other more specific positionals produced in other elicitation tasks.

To refer to motion events, speakers of Kilivila use a large number of motion verbs, generally in more, or less, complex serial verb constructions. For the analysis of these motion verbs it is crucial to describe how they encode the place and the role of the speaker and the source, path and destination of the motion event.

Speakers of Kilivila can utilize the intrinsic, the relative and the absolute FoR for verbal spatial references. However, they show rather clear preferences for certain FoR in certain contexts for certain functions. Thus, Trobriand Islanders prefer the intrinsic FoR for referring to the *location* of objects with respect to each other in a given spatial configuration - especially if these objects them-selves have inherent intrinsic features. The use of the relative FoR is also

possible here, but only rarely observed. However, in referring to the spatial *orientation* of objects in a given spatial configuration, Kilivila speakers clearly prefer an absolute ad hoc landmark FoR. Finally, the Kilivila expressions for 'left/right/front/back' have both intrinsic and relative interpretations: the respective reading is usually grammatically marked by possession.

The three topics discussed here would be crucial chapters of a Kilivila grammar of space. To write such a grammar of space would in fact be a demanding enterprise. Such a 'space grammar' would have to not only elaborate on the topics presented here in much more detail, but also to discuss many other different linguistic means Kilivila offers its speakers for spatial reference and for the conceptualization of space. Moreover, besides purely linguistically oriented chapters - such as, for example, chapters on deixis, on the lexicalization of certain complex spatial concepts, on the interaction of different grammatical categories in spatial reference, on the role of space in and for time reference, and so on - a really comprehensive Kilivila grammar of space would also have to incorporate more anthropologically oriented chapters. These chapters would have to discuss topics such as the relationship between environment, religion and mythology, the role of space for personal relationships (involving, for example, residence rules for married couples), and issues of land rights and other claims with respect to personal or communal possession of space. The chapters in the anthropological section would certainly equal the number of chapters in the linguistic section. And an ideal grammar of space should also incorporate chapters on spatial behaviour such as gesturing and pointing which accompanies or adds further information to verbal spatial references, on ethological concepts of space (e.g. 'personal space'), and last, but certainly not least, on spatial cognition as it is externalized, for example, in everyday routines like orientation, route knowledge, (mental and/or concrete) maps and navigation. 'Space' is indeed, and has always been, a broad domain and wide field for scientific enquiry. It is hoped that these initial observations will at least give some idea of how speakers of a different language conceptualize this universal but varied domain of human experience.