Lalang, Zes ek Kiltir

Multimodal Reference Marking in Kreol Seselwa

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List of Abbreviations

INTERLINEAR GLOSSING

1SG	1st person singular	**PAR**	particle
2SG	2nd person singular	**PL**	plural marker
3SG	3rd person singular	**POSS**	possessive
1PL	1st person plural	**PRES**	presentative
2PL	2nd person plural	**REFL**	reflexive pronoun
3PL	3rd person plural	**REC**	reciprocal
ART	article	**REL**	relative pronoun
ASP	aspect marker	**TNS**	tense marker
DEM	demonstrative	**Ø**	null element
NEG	negation marker		

GESTURE ANNOTATION

art-lh	left hand	**hs-B-lax**	handshape B-lax
art-rh	right hand	**hs-B-open**	handshape B-open
hs-5	handshape 5	**hs-claw**	handshape claw
hs-5-lax	handshape 5-lax	**hs-IX**	handshape IX
hs-A	handshape A	**hs-IX-lax**	handshape IX-lax
hs-A-open	handshape A-open	**hs-purse**	handshape purse
hs-B	handshape B	**mov-arced**	arced movement

mov-circ	circular movement	**pos++2**	position centre, arm stretched to front
mov-bendr	hand raised (bent upwards)	**pos++3**	position periphery, arm stretched to front
mov-bendp	hand bent towards pulse	**P-AB**	palm away from body
mov-bent5	hand bent towards little finger	**P-AC**	palm away from centre
mov-straight	straight movement	**P-TB**	palm towards body
pos+1	position centre-centre	**P-TC**	palm towards centre
pos+2	position centre	**P-TD**	palm towards down
pos+3	position periphery	**P-TU**	palm towards up
pos+4	position extreme periphery	**qu-L**	large gesture
pos-3	position periphery, hand in back space	**qu-M**	medium gesture
pos-4	position extreme periphery, hand in back space	**qu-S**	small gesture
pos0	touching in central areas	**S1, S2, …**	stroke number
pos3	position periphery, arm stretched to side	********	stroke
pos4	position extreme periphery, arm stretched to side	*****/*****	two strokes without any other gesture phase in between
pos++1	position centre-centre, arm stretched to front		

OTHER ABBREVIATIONS

FoR	Frame of Reference
KS	Kreol Seselwa
NP	Noun Phrase
VP	Verb Phrase
IOCs	Indian Ocean Creoles
IdeFC	Isle de France Creole
MC	Mauritian Creole
RC	Reunion Creole
n.a.	not applicable
(…)	Pause

1 INTRODUCTION

1.1 REFERENCE IN THE LIGHT OF SPEECH, GESTURE AND CULTURE

In a communicative interaction, the speaker of an utterance has to face the problem of conveying the intended message to the addressee and at the same time ensuring that the addressee understands the message. Since the addressee's state of knowledge differs from that of the speaker, the latter is forced to apply different strategies of disambiguation and reference marking in order to specify an intended referent. Thus, referencing not only involves a semantic link between the signifier and signified, but also the embedding of reference forms into the context of a communicative interaction. As such, linguistic and extralinguistic context influence the choice of individual reference forms.

Part of basic everyday communicative interaction is the reference to individuals and to locations. In person reference, nominal constructions, pronouns, as well as names and kinship terms are frequently occurring reference forms. Furthermore, the choice of a referring expression to introduce a referent is assumed to depend on the four interactive principles of achieving recognition, minimization of costs, association, and circumspection (Stievers, Enfield and Levinson 2007). The status of the individual principles has been found to strongly differ across cultures (Ibid.). Once a person has been introduced to the discourse, the interpretation of co-referential, i.e. anaphoric, relations is one of the main strategies to track this person both within and across complex sentences. For example, the description or the name of a person may be replaced by a co-referential pronoun, depending on the pragmatic circumstances. Furthermore, the selection of reference forms in a given situation may be shaped by both the social context of the communicative interaction and shared knowledge of the interlocutors.

In spatial reference, the predominant referring expressions are demonstratives, prepositions and adverbs. Furthermore, nominal constructions, pronouns and toponyms also play an inherent part in this reference type. An important theoretical distinction in spatial reference is made between a figure and a ground (Talmy 1983, 2000). The figure is the entity which is located, whereas the ground is an entity which serves as a point of reference with which the figure can be located. There are three major strategies of locating a figure, which are commonly referred to as ‘Frames of Reference’ (FoR) (Levinson 2003; Danziger 2010). In the ‘intrinsic’ frame of reference the location of a target figure is specified in relation to the intrinsic properties of the ground object. In the case of a ‘relative’ frame of reference, the viewpoint as

well as the orientation of the speaker is the crucial factor for locating the figure. The 'absolute' frame of references uses fixed reference items, such as cardinal directions, for the positioning of a certain figure. The use of these FoRs in everyday communication has been shown to differ across cultures. Several studies have shown that while Western cultures predominantly use a relative FoR, others prefer to express spatial setups with an absolute FoR (Haviland 1993; Levinson 2003; Majid et al. 2004; Niraula, Mishra and Dasen 2004; Levinson and Wilkins 2006, Le Guen 2011a, 2011b; Adone and Maypilama 2014). Furthermore, similar to person reference, the selection of reference forms to describe a location is context-dependent and may thus be shaped by shared knowledge of spatial setups.

Both person and spatial reference involve the use of 'exophoric' and 'endophoric' expressions. Exophoric expressions establish a link to a referent in the outside world, which is commonly referred to as deixis. The defining feature of deixis is that it is anchored in the speaker at the location and time of the utterance (Bühler 1965 [1934]). As a consequence, deictic expressions, such as demonstratives, are often also referred to as 'shifters', because their meaning can only be discerned by taking these three dimensions into account (Silverstein 1976). Endophoric reference involves not physical, but linguistic context. Its central operation is anaphora, in which e.g. a pronoun's meaning can only be discerned by taking into account the previously mentioned antecedent. Due to their similarities concerning context-dependency, endophora and exophora may be regarded as closely related phenomena.

The importance of context is not only restricted to endo- and exophoric expressions, but can be seen as a core aspect of reference itself. Since reference does not occur in isolation, but within a communicative interaction, the physical and social environment are key factors to be taken into account. Furthermore, as reference is always embedded within a discourse, information structure plays an important role as well. For example, the selection of a referential expression depends on whether the referent is mentioned for the first time, or whether it has been introduced earlier (Givón 1983). Furthermore, whether a referent assumes the role of a sentence topic or whether it is associated with the focus, adding further information to the sentence, is an important factor that may change the reference form selected (Gundel, Hedberg and Zacharski 1993).

In all instances of reference, speech-accompanying gestures frequently occur. These gestures can have multiple functions, sometimes reinforcing spoken content and sometimes adding further information to the spoken utterance (Kendon 1986, 2004b). Most importantly, gestures are both synchronous and co-expressive with speech (McNeill 1992). Their characteristics can be described according to their position on the so-called 'Kendon's Extended Continuum', which subsumes five subcategories: (1) a gesture's

relation to speech, (2) a gesture's linguistic properties, (3) the degree of referentiality, (4) the degree of conventionalisation, and (5) the character of semiosis (Kendon 1988; McNeill 1992, 2000b; Gullberg 1998).

Speech communities may strongly differ in their use of both linguistic expressions and gestures, as well as in the form and functions of certain gestures. Thus, the investigation of reference marking and co-speech interaction requires an interdisciplinary approach including both an anthropological and a linguistic point of view. The notion of an 'ecology of communication', based on Hymes' (1974) 'communicative economy', situates communicative acts in direct contact with the social, physical, and cultural environment (Haugen 2001). As such, communication is not regarded as an exchange of linguistic symbols in isolation, but rather as a cultural practice both shaping and being shaped by the environment (see also Bourdieu 1977). This framework has been extended by Kendon (2004b) to integrate gestures as an essential element in communication.

In sum, there are multiple strategies to indicate present or non-present referents in a conversation. Frequently, speech and gesture are combined to describe and disambiguate referents. Moreover, the sociocultural and physical environment of a communicative interaction may be regarded as one factor shaping the form of a multimodal act of reference. This study will show that reference is an inherently multimodal phenomenon that involves the interaction of speech, gesture, and culture (Figure 1.1).

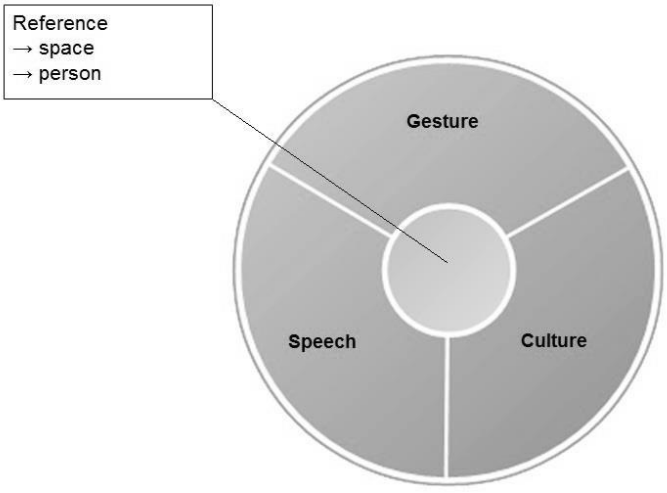


Figure 1.1 An interdisciplinary approach to reference.

Furthermore, this study will argue that reference is a dynamic process rather than a static relation between signifier and signified, and that it can be best described according to a tripartite approach. First, on a semantic level, a language contains several gestural and vocal form features for the individual types of reference. Second, on a pragmatic and interactive level, these form features are mobilised according to the specific circumstances of the communicative interaction, taking into account both linguistic and extralinguistic context. Third, it will be shown that sociocultural and sociohistorical structures that are specific to each speech community have an impact on the form and mobilisation of referential expressions. As such, insights into the mechanisms of reference marking can be best gained by an interdisciplinary approach which takes into account the points of view of linguistics, sociolinguistics, gesture studies and cultural studies.

1.2 Reference-Marking in Kreol Seselwa

The language investigated in this study is Kreol Seselwa (KS), which is spoken on the Seychelles. There are two main reasons for KS being a good candidate for the analysis of speech, gesture and culture in interaction. First, KS is relatively young and a non-Western language, two properties which have the potential to contribute to the general understanding of multimodal reference marking outside of Standard Western conventions. As several studies have demonstrated, gestures vary cross-linguistically, which is why KS has the potential to uncover further aspects of co-speech gesture interaction (Efron 1972; Haviland 1993; Özyürek and Kita 1999; Enfield 2001; Kita and Essegbey 2001; Kendon 2004a; Kita and Özyürek 2003; Levinson 2003; Wilkins 2003; Enfield, Kita and Ruiter 2007; Kita 2009, Le Guen 2011a, 2011b; Nyst 2016). Second, KS is a Creole language which has emerged under the extreme circumstances of colonisation and slavery. It combines a French-based lexicon with a syntactic profile that is very different from the lexifier language in that it features e.g. a strongly fixed S-V-O word order, little morphology, the use of TMA markers, or serial verb constructions (Choppy 2013; Corne 1977). From a cultural perspective, KS is characterised by its colonial past in that not only the language but also its speakers, as well as other cultural domains, are characterised by a mixed ancestry. Thus, this analysis suggests that the mixed origin underlying both KS and Seselwa culture is also reflected in the KS reference system and that the dynamic combination of speech and gesture in this special cultural and linguistic environment is the underlying

process that influences the shape of reference in this language. Furthermore, there is a general lack of studies systematically investigating gestural patterns in Creole languages[1].

As such, the overall claim of this study is that reference is not only a multimodal but also a tripartite system that combines (a) the semantic and grammatical form of a given reference, (b) the mobilisation of a reference form according to pragmatic circumstances, and (c) the community-specific communicative habitus which is the result of sociocultural and sociohistorical processes[2]. In order to investigate this tripartite and multimodal approach to reference in KS, the current thesis will approach the KS reference system by investigating several research questions, which concern these three levels of reference.

First, a descriptive part will focus on the form features of KS reference marking by discussing the following two questions:

(1) What linguistic expressions are used in KS to refer to individuals and locations?

(2) Which co-speech gestures do KS speakers use during those acts of reference?

After having set the ground with the investigation of general form features in the two modalities, the following question will initiate the analytic approach:

(3) How is the interaction of gesture and speech structured?

The main claim concerning this research question is that reference to locations and individuals is inherently multimodal. Considering the seminal work by Kendon (1986; 1988; 2000; 2004a; 2004b) and McNeill (1992; 1998; 2000a; 2000b; 2000c; McNeill and Duncan 2000) gestures and speech are expected to complement each other in their distribution and function. While information conveyed by speech is expected to suffice – in principle – for reference resolution in most cases, information conveyed by gestures is expected to supplement the specific referring act with further details about the referent and potentially add aspects that are not conveyed in speech.

A further step of analysis then embeds the speech-gesture ensemble in a communicative context, leading to the fourth research question:

[1] The only other systematic investigation of gesture use in a Creole language is Gardner's (2011) dissertation on nonverbal communication in Louisiana Creole.
[2] See also Hanks (1990).

(4) What factors influence the choice of reference forms in the two modalities?

One factor investigated in this study is proximity, which may be considered as an intrinsically spatial dimension. Depending on the proximity of a referent, different or additional lexical or grammatical means as well as different types of gesture may be used (Dixon 2003; Diessel 2014; e.g. Diessel 1999; Hanks 1990; Wilkins 2003). It will be shown that in KS, proximity is indeed a factor shaping by both gesture and speech. Furthermore, the use of individual FoRs in everyday communication and the effect on spatial language have been investigated cross-culturally (Haviland 1993; Le Guen 2011a; Levinson 2003; Levinson and Wilkins 2006; Niraula, Mishra and Dasen 2004). Moreover, gestures produced in an absolute FoR have been found to be characterised by specific phonological and semiotic features (Levinson 2003, Le Guen 2011a, 2011b; de Vos 2012). Thus, the specific patterns of multimodal expression of FoRs in KS will be uncovered.

In person reference, the strategies for initially introducing individuals to the discourse have been found to differ across cultures (Enfield and Stievers 2007). Depending on the specific ranking of individual preferences in a given speech community, different reference forms may be preferred over others to introduce individuals (Levinson 2007; Brown 2007; Garde 2013). Based on these assumptions, it will be shown that initial reference to individuals is guided by such preferences in KS as well.

As discourse unfolds, the difference between newly introduced referents and referents already established in the discourse context has been shown to have an impact on the reference form used in speech (Givón 1983; Gundel, Hedberg and Zacharski 1993; Gundel and Fretheim 2004; Arnold et al. 2015) as well as in gesture (Enfield, Kita and Ruiter 2007; Foraker 2011; Wilkin and Holler 2011). In addition, relational givenness, i.e. the individual topic-focus structure of clauses, may have an impact on the use of grammatical markers. Finally, emphasis of topic or focus of a given proposition may involve both gestural and structural means. The patterns of expressing discourse status as well as information structure in KS will be shown to involve not only speech, but also gesture.

Moreover, in addition to the linguistic context in discourse, reference forms can be adapted to aspects of the extralinguistic context (Givón 1983; Diessel 1999; Auer 2009). For example, aspects inherent to the communicative situation, such as referents and reference points in the immediate surrounding, or the social context in which a conversation takes place, can influence the strategies of mobilising reference forms. Furthermore, knowledge which is shared by the interlocutors is an important factor in the production and interpretation of reference forms. The more information is provided by such common ground, the less linguistic material is required to achieve a recognition of the referent (Prince 1992; Huang

2000; Clark 2006; Auer 2009; Arnold et al. 2015). Common ground has been found to have an impact on gesture production as well (Levy and McNeill 1992; Gullberg 2006; Holler and Wilkin 2009; Foraker 2011; Navarretta 2011). It will be shown that in KS, contextual factors play an important role, especially considering that KS is a language which allows for bare NPs, i.e. nominals without articles or number markers (Bruyn 1994; Baptista 2007; Déprez 2007), whose correct interpretation requires contextual information. Furthermore, shared cultural knowledge will be shown to be reflected in both modalities.

After having analysed KS-specific characteristics of multimodal reference in communicative interaction, the communicative ecology in which these acts of reference occur will be taken into account.

(5) Which sociohistorical and sociocultural factors can be considered to shape the KS reference system?

Evidence will be provided that the specific circumstances under which KS emerged as well as the social structure on the Seychelles are reflected in multimodal reference. Furthermore, patterns of a postcolonial society, such as hybridity, variability and creativity will be shown to have an impact on both KS speech and gestures.

Finally, the interfaces of speech, gesture, and culture will be discussed:

(6) What are the implications for the general mechanisms of gesture-speech interaction?

(7) What are the implications for the relation between person and spatial reference?

(8) What are the implications for the nature of reference?

In the light of the patterns of multimodal reference marking in KS, several aspects of gesture-speech interaction will be revisited. Furthermore, it will be shown that person and spatial reference interact with each other on several levels. Finally, the notion of reference as a dynamic, multimodal process that is embedded within an ecology of communication, will be substantiated.

1.3 SYNOPSIS

As a consequence of the interdisciplinary approach to the multimodal and tripartite system of reference, this thesis is structured into three major parts. The purpose of the first part is to provide a theoretical basis by a comprehensive overview of those key notions in Linguistics, Gesture Studies, Creolistics and Anthropology which are relevant to the analysis. Chapter 2 introduces the basic theoretical approaches to reference, including semantic, grammatical and pragmatic aspects of person and spatial reference. As such, it combines theoretical assumptions of linguistic approaches to reference with cross-linguistic findings. In chapter 3, I provide background information on the nature of gestures as well as an overview of research that has been conducted on gestures involved in spatial and person reference. The structural intertwining of gesture and speech are first approached from a theoretical point of view. These theoretical assumptions are then illustrated by the findings of various studies that investigated individual gestural phenomena across cultures. Chapter 4 describes the notion of culture and the role of communication in the light of Cognitive Anthropology, Symbolic Anthropology and Practice Theory. The advantages of an interactive approach to culture are highlighted and the theory of an ecology of communication is introduced as a key framework in which the analysis of KS multimodal reference can be embedded. Chapter 5 focuses on Creole languages and societies, providing an overview of the linguistic and sociocultural background involved in their formation. Since sociohistorical and sociocultural factors are considered to interact with reference in communicative interaction, Kreol Seselwa is further described from the angle of Creolistics and Postcolonial Theory. After this introduction of the basic theoretical assumptions, Chapter 6 gives an overview of the methodology used for data collection and data analysis.

The second part presents selected aspects of the KS reference system. This analysis reflects the overall hypothesis that reference is a tripartite system in which semantic, pragmatic and cultural aspects interact with each other. Chapter 7 provides a descriptive account of the form features of multimodal reference in KS. It is demonstrated that KS has a lexicon predominantly based on superstrate, but also to some extent on substrate influence. Furthermore, the reduced article system and the flexibility of number marking in KS is illustrated, foreshadowing the context-dependency of KS reference marking. Finally, the form features of KS gestures are presented and it is shown that several features can be associated with spatial and person reference. On a pragmatic level, Chapter 8 and 9 analyse the data collected in 2014 and 2015 with regard to the mobilisation of individual reference forms in a communicative interaction, as well as according to the factors mentioned above. The data provide evidence that KS exhibits multiple strategies of person and spatial reference, which are variably used and which depend on contextual features to a large extent. Furthermore, the close intertwining of gestures and speech is illustrated, further supporting the notion that not only reference marking but also human communication in general is

inherently multimodal. In Chapter 10, sociocultural aspects are added to achieve the description of a micro-ecology of multimodal communication on the Seychelles. It is argued that the dynamic mix of referencing strategies is a reflection of the sociohistorical and sociocultural characteristics of Seselwa society and can be linked to the notion of 'Creoleness'. Furthermore, the specific features of the gesture-speech ensemble in KS is foregrounded, arguing that KS is not simply a mix of sub- and superstrate features, but rather a creative system of communication on its own.

In Part III, this analysis is followed by a general discussion in Chapter 11, in which the implications of the KS reference system for the nature of gesture and the nature of reference are highlighted. It is shown that despite their differences in modality, conventionalisation and semiosis, gesture and speech form a united system. Furthermore, the discussion relates the findings of KS multimodal reference to the theoretical assumptions made in Part I, and argues that reference is a dynamic process in which speech, gesture, and culture interact with each other. Finally, chapter 12 provides a short summary of the findings and some concluding remarks.

Part I: Theoretical Background

2 REFERENCE

2.1 INTRODUCTION

2.1.1 Overview

This chapter provides an overview of the different linguistic approaches to reference. It first introduces traditional linguistic key notions that approach reference from a semantic point of view. Then, pragmatic approaches to reference are presented and the framework of reference, which guides the analysis of the KS reference system, is introduced. A further section gives information about 'endophoric' and 'exophoric' reference and suggests that deixis and anaphora are closely related to each other. Also, factors influencing the form of reference throughout discourse, such as 'relational and referential givenness', as well as information structure and context, are presented. After this general overview, key notions of spatial reference are introduced and the different 'Frames of Reference', with which spatial arrays can be described, are illustrated. Finally, referential forms and strategies of person reference are described, with a focus on preferences for initial person reference.

2.1.2 Semantic and pragmatic approaches to reference

One of the core functions of human language is referring to entities and keeping track of this reference across discourse. Carlson (2004) refers to Hockett and Altmann's (1968) design feature of 'aboutness' as a defining characteristic of human communication, which can be further narrowed down to reference as "an act in which a speaker uses signs to enable a hearer to identify something" (Nunberg 1978: 29). There is vast cross-linguistic variation of strategies for establishing reference and they often depend on the type of reference, differing e.g. between reference to locations and reference to individuals. Among the most common strategies we find referential noun phrases (NPs). Table 2.1 lists the different types of nominal constructions that can be used for different referential functions.

Table 2.1: Referential NPs (Adapted from Abbott 2010:7).

Type	**Example**
Proper names	Carmen, Nelson Mandela
Pronouns	I, she
Referring expressions	
- Bare NPs	strawberry ice cream, colourless green ideas
- Indefinite descriptions	a dog, a cup of tea
- Definite descriptions	the book, the happy couple
- Possessive constructions	my old car, Julia's present
- Demonstrative descriptions	this nice lady, those new shoes
Quantificationals	every student of linguistics, few politicians

Next to nominal constructions, grammatical markers may also be used to track a referent. Examples for this are gender- or number-marking systems, case stacking, or switch-reference markers. Finally, reference may also be covertly expressed by zero-markers, a strategy that is often used if the referent is highly salient in discourse or assumed to be generally known by the listener. In some languages, this kind of strategy is used extensively, resulting in an inference system of reference tracking that relies on both social conventions and pragmatic inference (Huang 2000: 13).

From a theoretical perspective, one can distinguish between semantic and pragmatic approaches to reference. Among the most influential semantic theories of reference, which mainly focus on reference as an inherent property of linguistic signs, are those of Frege (1892) and Mill (1843). Mill established the two concepts 'denotation' and 'connotation' in relation to reference. An expression's denotation is its application to an entity in the world, while its connotation implies a set of features associated with this entity. Similarly, Frege differentiated between 'sense' and 'reference'. While reference indicates the denoted referent of an expression, sense further adds a certain mode of representation, distinguishing it from other co-referential expressions. As Carlson (2004: 79) puts it, "reference is determined indirectly from expressions of a language […] : a bit of language expresses a sense, which in turn determines a reference". The following sentence is Frege's famous example illustrating the distinction between sense and reference, which includes one reference (i.e. Venus) and two senses (i.e. the conception of Venus as the morning star vs. the conception of Venus as the evening star).

(2.1)

The morning star is the evening star.

Combining the two approaches, one can put denotation and reference in one and connotation and sense in another group. However, as Saeed (2003: 23 ff.) notes, the major difference between denotation and reference is that the former term describes a fixed relationship between an expression and the world, whereas the latter describes the action of picking out referents in the world. In sum, the connotation and sense of an expression may be seen as "the mechanism for achieving reference" (Abbott 2010: 13)

Pragmatic approaches, in contrast, draw the attention to the actual use of an expression to establish reference, rather than referentiality being solely a characteristic of certain words and phrases in isolation (e.g. Strawson 1950; McGinn 1981). As such, factors such as implicatures, context, world knowledge and embeddedness within discourse must be taken into account when investigating referential information conveyed by certain expressions. One central theme in pragmatic approaches to reference is the triangulation of speaker[3], addressee and referent within a communicative interaction. Speaker and addressee may differ with regard to their intentions and their knowledge states, which may lead to different understandings of individual referential expressions. In order for communicative interactions to be successful, i.e. to involve at least similar speaker- and addressee-interpretations despite the possible discrepancy in knowledge states, several guidelines have been postulated that are assumed in a conversation by both speaker and addressee. One of the most influential accounts of such guidelines are the Gricean Maxims of Conversational Implicature. Grice (1975) lists four maxims – Quality, Quantity, Relevance and Manner – that can be assumed to be background assumptions interpreting an utterance, and thus also for reference resolution. In sum, pragmatic approaches to reference go beyond the mere selection of a referent from a variety of potential candidates, and include the interactional aspects of a conversation in which a speaker "establishes or maintains a communicative focus on some entity, usually in order to say something about it" (Enfield 2012: 433)

The distinction between semantic and pragmatic aspects of reference[4] can also be found in Hanks' (1990: 32) three levels of meaning: (i) the semantic level, (ii) the way of mobilisation of semantic reference in an interaction[5], and (iii) the conventions, or "socially grounded understandings" underlying this mobilisation. Hanks' focus on the pragmatic and socially interactive aspects thus locates reference on level (ii) and (iii). He regards reference as "a socially significant phenomenon" which is "intelligible only in relation to a sociocultural system" (Hanks 1990: 4f.). This importance of the sociocultural system for the strategies of reference marking and resolution has been demonstrated

[3] Note that the term 'speaker' is used in a very broad sense. The following claims of course also hold true for signed conversations, where no vocal language is involved.
[4] Silverstein (1976: 20) uses the terms 'semantic' vs 'non-semantic' meanings contributing to reference, whereas Donnellan (1978) calls the two approaches 'semantic' vs 'speaker's' reference.
[5] See also Eriksson (2009) for a more recent discussion of reference as an interactive process.

in both spatial reference (e.g. Levinson and Wilkins 2006a; Haviland 1993) and person reference (e.g. Enfield and Stivers 2007; Garde 2013). As a consequence, reference not only concerns the successful exchange of information about a referent but is also involved in the negotiation of social relations between the participants of a conversation and a referent (see also Hanks 1990; Nettle and Dunbar 1997; Enfield and Stivers 2007; Garde 2013)

The analysis of multimodal reference marking in Kreol Seselwa at hand is based on several assumptions grounded in Hanks' (1990) three levels of meaning, with the addition of a gestural component to the process of reference marking. Besides the description of the form of referential utterances (level i), a focus is set on the concrete strategies of reference marking in communicative interaction (level ii). The analysis of level (ii) considers reference to be inherently multimodal, i.e. not only relying on spoken words but also including information conveyed by gestures. The mobilisation of multimodal reference forms is analysed according to linguistic and extralinguistic factors, relying on both convention and ad hoc creations of reference in a social interaction. Finally, with regards to level (iii), the KS reference system is embedded in an 'ecology of communication', meaning that sociohistorical and sociocultural factors are taken into account. In sum, a functional approach to reference has been chosen, including not only the linguistic system in isolation, but also co-speech gesture and the cultural domain.

2.2 Deixis and Anaphora

2.2.1 Introduction

In addition to referring expressions, such as descriptions or names, pronouns and demonstratives are also frequently used to establish reference. They can be characterised as "semantically deficient" (Levinson 2004: 101), i.e. their resolution requires additional information. Furthermore, their referents change according to both linguistic and non-linguistic context, which is why they have also been termed 'shifters' (Jakobson 1957). A common distinction is drawn between exophoric and endophoric reference. In the case of exophora, the interpretation of a pronoun or a demonstrative involves information outside the actual text, such as the physical environment or knowledge about previous texts. In endophoric cases, however, the interpretation is dependent on a second linguistic element, the antecedent. This usually co-referential structure may take the form of an 'anaphora'[6] or a 'cataphora'.

[6] As mentioned by Huang (2006:231), the term anaphora is also often used to refer to endophoric relations in general.

2.2.2 Deixis

In Peircean semiotic theory, an indexical is characterised by the contiguity of a sign and the object it is related to. The linguistic realisation of this semiotic relation is called 'deixis', with the linguistic signs used to establish this relation being called 'deictics', or 'shifters'. The term 'deixis' comes from the Greek word for pointing, and according to Lyons (1977: 637) involves

> […] the location and identification of persons, objects, events, processes and activities being talked about or referred to in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and at least one addressee.

Traditionally, three major areas of deixis have been identified – spatial deixis, person deixis, and temporal deixis (Fillmore 1997, 1982). In addition to these three core deictic dimensions, social deixis, including honorifics and other linguistic means of pointing to social relationships, and discourse deixis, i.e. expressions pointing to other discourse segments, may be added (Silverstein 1976; Fillmore 1997; Levinson 2004). Furthermore, Hanks (1992: 48) draws attention to the "functional heterogeneity of deixis" and lists among others aspects such as evidentiality, animacy, visibility or immediacy as potential candidates for deictic encoding, varying cross-culturally.

Bühler's (1965 [1934]) 'Zweifeldtheorie' distinguishes between two types of linguistic expressions: expressions that point ('Zeigewörter', i.e. pointing words), and expressions that are used symbolically ('Nennwörter', i.e. naming words). He further differentiates three ways in which pointing words could be used. In the case of 'demonstratio ad oculus', the referent of the deictic expression is clearly visible in the immediate environment. The case of 'anaphora' involves pointing at another word. Finally, the most complex case is 'deixis am phantasma', for the description of which Bühler's concept of the 'origo' is necessary. The origo is the deictic centre from which the vector of a pointing expression or a pointing gesture is computed, similar to the origin of a coordinate system (Bühler 1965 [1934]). According to Bühler, the three basic notions that are relevant for the origo are 'here', 'now', and 'I', thus taking the three core deictic dimensions into account (Ibid.). In opposition to 'demonstratio ad oculus' and 'anaphora', 'deixis am phantasma' may involve a transposition of the origo. This means that the intended referent of a deictic expression can only be correctly identified if not the speaker in the here and now, but an imagined protagonist and its location, which are further specified by the context, are regarded as the actual origo. Bühler lists three subtypes of deixis am phantasma: a metonymic type, where the speaker combines a point in actual physical space with an invisible referent; direct deixis without visual continuity from the origo to the referent; and metaphorical deixis, which is the only case that requires the transposition of the origo (Bühler 1965 [1934]).

While the Bühlerian account focuses mainly on deixis as an inherent property of a linguistic expression, Fillmore (1997; 1982) draws attention to the importance of the utterance level, i.e. the deictic use of linguistic expressions. As such, he distinguishes between "[…] the manner in which the socio-spatio-temporal anchoring of a communication act motivates the form [and] the grammatical and lexical systems in the language which serve to signal or reflect such anchoring" (Fillmore 1982: 35). Thus, he adds a pragmatic dimension to the definition of deixis, taking into account the communicative level and contextual anchoring.[7]

In addition to the semantic and pragmatic aspects of deixis addressed by Bühler and Fillmore, Silverstein (1976) draws a further distinction between referential and non-referential indexes, the latter providing further information on the social dimension of the speech event[8]. This is complemented by Hanks (1990), who suggests a switch from an 'egocentric' analysis of deixis to a fundamentally 'sociocentric' one. Hanks (1990; 1992) further distinguishes between three different functional components of deictic reference: the 'characterising features' constitute a description of the referent and include categories such as human/animate or punctual/restricted, whereas the 'relational features' focus on the relation between the referent itself and the origo, e.g. inclusive/exclusive or immediate/non-immediate. The 'indexical features' specify the indexical ground, or origo, according to which the referent is established.

Bühler (1965 [1934]), as well as Fillmore (1982; 1997) and Hanks (1992; 1990) mention non-vocal means such as pointing gestures or eye gaze frequently accompanying deictic reference in speech. As mentioned above, in most cases a deictic reference can only be correctly interpreted if the non-vocal information is taken into account. Further indication that non-vocal information may play an essential role in the resolution of deictic expressions comes from Diessel (1999) who lists the pointing gesture as one of three distinctive features of exophoric demonstratives. Further details of the pointing gesture, its integration with speech and aspects of its physical realisation will be described in chapter 3 and chapters 7-10.

[7] According to Fricke (2007: 36), this distinction allows for the dynamic integration of gesture and speech in deictic utterances.

[8] Among Silverstein's (1976:30 ff.) examples of non-referential indexes we find a gender-marking affix in Koasati, deference indexes in Javanese and affinal taboo indexes in Dyirbal.

2.2.3 Anaphora

In opposition to deixis, which is an instantiation of exophoric reference, anaphora often relies on co-referential relations in order to establish endophoric reference[9]. There are different realisations of this relation that are commonly subsumed under the term 'anaphora'. The two classical types are anaphoric/cataphoric relations that are established between a pronoun and its antecedent and fall into the category of 'NP anaphora'. Furthermore, reflexives, names and descriptions, as well as gaps, can also be part of NP anaphora (Huang 2006)[10]. Similarly, systems such as switch-reference markers, as they are found in many Australian Aboriginal languages (Austin 1981), or inflectional systems, such as gender or number marking, can be used to point back to an earlier established antecedent. Finally, demonstratives and even definite articles may function as anaphors. Huang (2000:7) further associates the different types of anaphora with different types of context. While names and descriptions are associated with encyclopaedic knowledge, the anaphoric use of demonstratives tends to relate to physical context. Pronouns and reflexives are considered to refer to linguistic context. It is important to note that even though endophoric reference establishes a relation between an anaphora/cataphora and an antecedent, this relation itself is not referential. However, together both elements simultaneously establish reference to an entity.

The resolution of anaphora and the interaction of the two co-referential constituents has been investigated within several linguistic disciplines. Syntactic approaches, such as the analysis within the generative framework, focus on structural dependencies within a sentence and differentiate between anaphors and pronominals as NP features (e.g. Chomsky 1981, 1986)[11]. From a semantic point of view, a truth-conditional approach can be used to differentiate between the inherent properties of individual types of anaphora. In this framework, Huang (2000: 5) defines referential anaphora as referring "to some entity in the external world either directly or via its coreference with its antecedent in the same sentence or discourse". Finally, pragmatic approaches to anaphora further involve instances where the anaphor and the antecedent occur in different sentences or co-referential relations whose resolution requires additional external knowledge. Huang (2000) analyses anaphora using Levinson's (2000; 1995) Neo-Gricean framework, including Q-, I-, and M-Principles. Table 2.2

[9] There are also cases in which the antecedent and the anaphor are not co-referential, such as in "John has a car and Mary bought one, too". Here, the anaphor *one* and its antecedent *a car* do not refer to the same entity. However, such cases are not considered in the following analysis.

[10] Other types such as VP anaphora, non-referential anaphora or anaphora of laziness will not be considered here, since the focus of this analysis is spatial and person reference, which are mainly expressed by referential NPs. I would like to refer the interested reader to Huang (2006) for a general overview of anaphora types.

[11] See Huang (2000: 16 ff.) for a comprehensive overview.

summarises the three heuristics (in italics) (Levinson 2000: 35 ff.) as well as the resulting speaker's maxims (in upright) (Huang 2006: 207 ff.).

Table 2.2: Summary of Levinson's Neo-Gricean Approach to Conversational Implicature.

Quantity	*What isn't said, isn't.* Do not provide a statement that is informationally weaker than your knowledge of the world allows, unless providing a stronger statement would contravene the I-principle.
Informativeness	*What is expressed simply is stereotypically exemplified.* Produce the minimal linguistic information sufficient to achieve your communicational ends (bearing the Q-principle in mind).
Manner	*What's said in an abnormal way isn't normal*. Do not use a prolix, obscure, or marked expression without reason.

This "revised neo-Gricean pragmatic apparatus for anaphora" (Ibid.: 215) consists of the interaction of interpretation principles, i.e. Levinson's neo-Gricean maxims, on the one hand, and general consistency constraints, such as information saliency, background assumptions, context, world knowledge and semantic entailment, on the other hand.

Anaphora not only occurs within sentence boundaries, but may also be spread across discourse. In this case, overt reference tracking systems, as mentioned earlier, may be used to establish a relation between an antecedent introduced early in discourse and an anaphor appearing in the subsequent or even after several sentences. The resolution of discourse anaphora has been embedded in Givón's (1983) 'Topic Continuity Model', in which factors such as referential distance, potential interference, availability of semantic information, and availability of thematic information are taken into account for the identification of topics in a discourse. In his hierarchy of grammatical devices encoding topics, we find zero anaphora and pronouns towards the top of the scale, associated with more continuous and accessible topics[12]. Another approach is offered by Huang (2000), who extends his Neo-Gricean analysis of anaphora from individual sentences to discourse. He mainly lists the Q- and I-principles as interacting with each other, leading to the distribution of anaphora across discourse in a predictable pattern. According to him, "[m]aintenance of reference tends to be achieved through the use of an attenuated form, notably, a pronoun or a zero anaphor" (Huang 2000: 319).

[12] More details are provided below in connection with information structure (section 2.3).

2.2.4 Deixis and anaphora on common ground

As Givon's topic continuity scale and Huang's pragmatic model of discourse anaphora suggest, there are cases in which anaphora resolution requires additional external knowledge to be taken into account. This has been one reason for some scholars to argue that the distinction between deixis and anaphora, and thus to a certain extent between exophora and endophora, is not valid. Vallauri (2007: 313), for example, claims that anaphora should be considered to be a subtype of deixis rather than its opposite. The blurred boundary between the two phenomena can already be found in Bühler's (1965 [1934]) theoretical approach, which considers both anaphora and the two different forms of deixis as members of the category 'Zeigefeld', i.e. as expressions that are used to point to their referents. Also, deixis am phantasma and anaphora show certain similarities in their level of abstraction in contrast to deixis ad oculus, where the referent is considered to be part of the immediate speech situation. Furthermore, Fillmore (1997: 62 f.) draws a distinction between different uses of deixis – gestural, symbolic, and anaphoric –, which he describes as different levels of abstraction of the same phenomenon, from concrete and visible within the speech situation to a rather abstract presence within discourse.

There is cross-modal evidence supporting a common basis for anaphora and deixis. On the vocal level, the same lexical forms may be used deictically and anaphorically, as it is the case in English. This is illustrated in the examples below. While (2.2) illustrates the deictic use of *this* and *there*, example (2.3) illustrates how the two demonstratives can fulfil an anaphoric function as well.

(2.2)

a) What's **that** he's got in his hand?

(Stirling and Huddleston 2002: 1454, my own emphasis)

b) I want you to put it **there**.

(Fillmore 1997: 63, my own emphasis)

(2.3)

a) He wants $30, but **that**'s too much.

(Stirling and Huddleston 2002: 1454, my own emphasis)

b) I drove the car to the parking lot and left it **there**.

(Fillmore 1997: 63, my own emphasis)

On the gestural level, instances of deixis am phantasma, and in fact also instances of anaphora, can be accompanied by abstract pointing gestures – a relation which will be illustrated in Chapter 8 and 9.

Furthermore, Diessel (1999) considers the link between an abstract pointing gesture and deixis am phantasma to be an important piece of evidence for an underlying exophoric process.

In this study, the general distinction between endo- and exophoric reference, with the most common instantiations being anaphora and deixis respectively, will be used as a starting point for the following analysis. However, the two phenomena will be regarded as two endpoints of a continuum rather than two fixed categories. This is in line with Cornish (2011), who also argues for a scalar approach, including deixis and anaphora at the two very end points of the scale and 'anadeixis', i.e. mixed forms such as 'strict anadeixis', 'recognitional anadeixis' and 'discourse deixis'[13], in the central area.

In sum, endophora and exophora constitute two key notions in both spatial and person reference. Furthermore, deixis and anaphora can be considered to be two extremes on one and the same continuum of 'pointing expressions' and are thus relevant not only to the analysis of demonstratives and pronouns, but also to the gestures that accompany speech.

2.3 Reference, Information Structure and Discourse

2.3.1 Topic and focus

Discourse is characterised by multiple referents being introduced, maintained, and re-introduced in a dynamic fashion. In addition to keeping track of an individual referent, it is also important to assign anaphoric expressions to their respective antecedents correctly. Furthermore, individual referents may be foregrounded or backgrounded, depending on their status within the discourse segment. This distinction between foregrounded and backgrounded information is a central aspect of information structure, i.e. the packaging of (linguistic) information. The individual concepts of information structure are "notoriously variable across researchers and topics" (Arnold et al. 2015: 404). Two major distinctions that often overlap to some extent are drawn between backgrounded/assumed versus foregrounded/highlighted information, and new versus given information.

The first approach involves the binary distinction between 'topic' and 'focus'. Lambrecht (1994: 127) gives the following definition of a discourse topic, approaching it from a pragmatic point of view:

[13] Anadeixis is a combination of deictic and anaphoric expressions. In the case of strict anadeixis, demonstratives may be used anaphorically, while in recognitional anadeixis, demonstrative NPs may presuppose shared representations and, at the same time, point towards them deictically. Finally, discourse deixis involves demonstratives that point towards elements in the surrounding discourse (Cornish 2011).

> A referent is interpreted as a topic of a proposition if in a given discourse, the proposition is construed as being about this referent, i.e. as expressing information which is relevant to and which increases the addressee's knowledge of the referent.

Whether a referent can be regarded as being topical depends on whether it has already been mentioned in discourse. Furthermore, grammatical positions within a sentence may trigger a topical interpretation as well, since pronouns in e.g. subject position suggest an anaphoric relation to a previously mentioned referent which has been introduced in the same position before (Arnold et al. 2015). In addition, some languages, such as Japanese, designate a specific morphological marker to attach to a topical referent. While the discourse topic represents backgrounded information, the focus, on the other hand, deals with foregrounded information. In the words of Lambrecht (1994: 207),

> [t]he focus is that portion of a proposition which cannot be taken for granted at the time of speech. It is the unpredictable or pragmatically non-recoverable element in an utterance.

In summary, while the topic of an utterance relies on information that is already known and thus backgrounded, the focus of an utterance contributes additional information about the topic (Arnold et al. 2015: 410). However, it is very important to distinguish between discourse topic/focus and sentence topic/focus: The referent of a discourse topic may have been introduced several sentences before, i.e. the information is transmitted across sentence boundaries. The sentence topic, however, is approached from a semantic and/or syntactic point of view and is, as the term suggests, restricted to the information structure of individual sentences.

A further important distinction is the one between 'referential givenness' and 'relational givenness' (Gundel and Fretheim 2004: 176 ff.). While referential givenness is determined by discourse context and thus involves knowledge states of the conversation participants, relational givenness corresponds more to the notion of the binary sentential topic-focus relation, in which one part represents what the sentence is about and the other part introduces new information about this referent[14]. Thus, a connection may be drawn between referential givenness and a discourse topic on the one hand, and relational givenness and sentence topic on the other hand.

The term 'focus' has also been used rather differently in syntactic accounts, referring to a certain emphasis in a sentence. According to Gundel and Fretheim (2004: 185), however, "there is no one-to-one correlation between topic or focus and particular syntactic constructions either across languages or even within particular languages". From a syntactic point of view, focus is often

[14] As Gundel and Fretheim (2004: 178) note, relational givenness may also be influenced by information from the discourse context. However, in opposition to referential givenness, it is not exclusively determined by this sort of information.

associated with dislocation of an element towards the beginning of a sentence, as is demonstrated in examples (2.4a-d), taken from Gundel and Fretheim (2004:185):

(2.4)

a) Fred ate the beans.
b) The beans, Fred ate.
c) It was the beans that Fred ate.
d) The beans, Fred ate them.

In the canonical sentence structure in (2.4a), the topic *Fred* and focus *the beans* can be easily defined. However, (2.4b) shows a dislocation of *the beans*, which depending on the interpretation could be analysed as a topic or a focus. In sentences containing clefts (2.4c), similar problems arise, especially when taking into account intonational aspects as well. The dislocated element in (2.4d), *the beans*, on the other hand, can be traditionally interpreted as topic, with evidence coming from several languages, including topic-prominent languages such as Japanese. Since a detailed discussion of the interface between syntactic structures, topic-hood and givenness would go beyond the scope of this thesis, the following analyses will be assumed, following Gundel and Fretheim (2004) and Bickerton (1993):

(2.5)

a) Fred (topic) ate the beans (focus).
b) The beans (focus), Fred (topic) ate.
c) It was the beans (focus) that Fred (topic) ate.
d) The beans (topic), Fred (focus) ate them.

Thus, operations such as (2.4b) and in (2.5b) are referred to as 'focalisation', whereas sentences such as in (2.4d) and (2.5d) are analysed as instances of 'topicalisation', for the purpose of this thesis. Furthermore, a topic can be emphasised a dislocation to the left, followed by an additional pronoun as well:

(2.6)

My brother (topic), he (topic) plays the guitar (focus).

In the following analysis, this structural emphasis is referred to as 'dislocation'.

2.3.2 Old and new information

Next to the binary approach of topic vs focus, there are also several approaches relying on a more gradient view of information structure. The factors according to which information statuses are defined on a continuum are 'accessibility' (e.g. Chafé 1987), 'givenness' (Gundel, Hedberg and Zacharski 1993), and also 'topicality' (Givón 1983). Prince (1992) differentiates between 'hearer-old/new' information and 'discourse-old/new' information. Hearer-old knowledge about a certain referent is already mentally present in the hearer's mind and, at least in English, expressed by the use of a definite NP, while hearer-new information is usually coded by indefinite NPs. Discourse-old referents, on the other hand, have explicitly been mentioned in previous discourse, while discourse-new referents are newly introduced. Thus, a referent may be discourse-new but at the same time hearer-old, as it is the case in e.g. mutually known individuals. Interestingly, as Prince (1992) illustrates, it is not possible to assign a certain form to discourse-new/old statuses, since both definite and indefinite NPs may be used for both. The only exception she mentions are pronouns, which usually mark previously introduced and thus discourse-old referent. Finally, Prince (1992) adds a third category of information status, thus leaving the binary distinction behind[15]. 'Inferable information', which again does not seem to be associated with a specific word form in English, relies on assumptions about the hearer's general knowledge and world knowledge. Prince thus draws similarities to hearer-old information, but also notes that technically speaking inferable information is hearer-new. However, this hearer-new referent is interpreted by the hearer with the help of an associated discourse-old entity which triggers hearer-old knowledge.

Another gradient approach to information structure includes the notion of discourse topicality mentioned above. Based on the binary approach of topic vs focus, the idea here is that in discourse several topics may compete and be reintroduced in different segments after their first mention. The tracking of topics and thus the resolution of topical referents depends on several factors: the gap between the first and the second mention, whether there have been other topics interfering in this gap, semantic information, and thematic information, i.e. the overall background knowledge about e.g. referent roles in the overall discourse (Givón 1983: 11). Givón (1983) further suggests that 'continuous topics', i.e. referents that are re-mentioned shortly after introduction without a larger intervening gap, differ in both reference form[16] and word order[17]. According to him, the choice of

[15] Nevertheless, Prince (1992) does not seem to be convinced of a gradient approach to information structure at this point and discusses the possibility of inferable information forming a separate continuum.

[16] Givón (1983: 18) refers to the referential form as "phonological size", emphasising the length of the coding material.

[17] Of course the differences in word order for different states of topic continuity/accessibility is relevant only for those languages which have a fixed 'standard' word order.

reference forms depends on an iconicity principle, stating that "[t]he more disruptive, surprising, discontinuous or hard to process a topic is, the more coding material must be assigned to it." (Ibid.: 18). Furthermore, both reference form and word order choice are of scalar character (Figure 2.1).

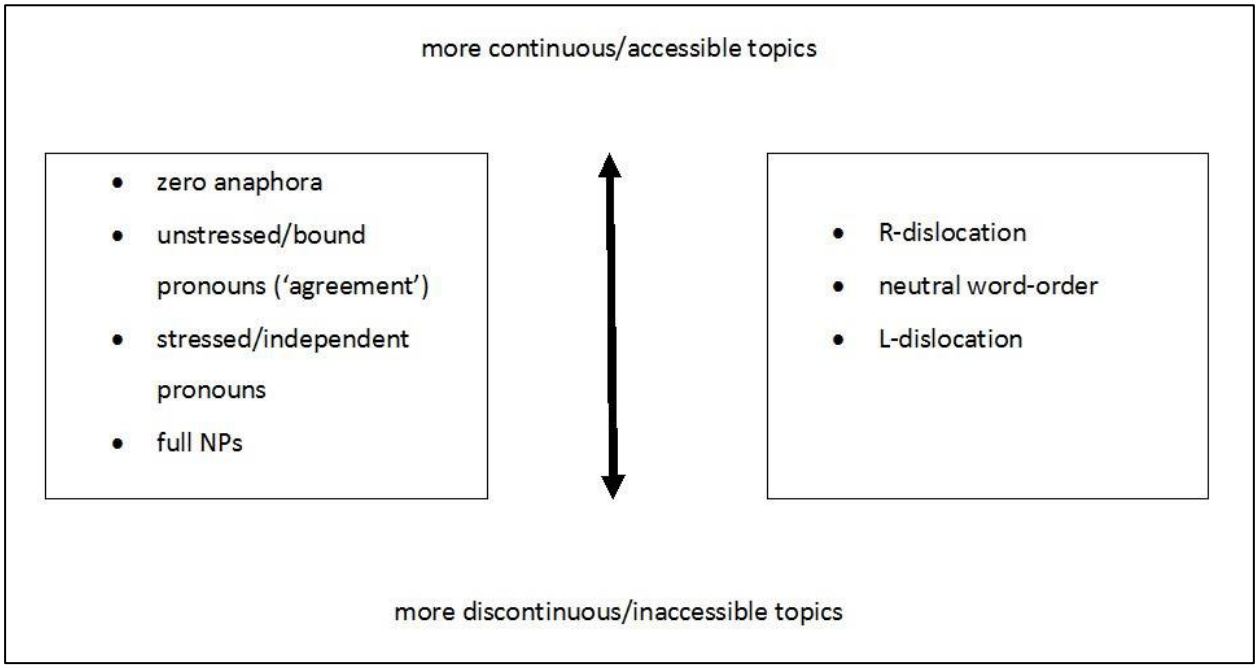


Figure 2.1: Topic continuity scale according to Givón (1983: 18 f.)[18].

Further forms associated with first mentions or the re-introduction of a referent are (indefinite) descriptions, names, and relational descriptions including possessive constructions. However, it is important to bear in mind that the actual choice of forms, especially concerning person reference, is also heavily influenced by e.g. cultural features such as circumspection (see section 2.4 below). Considering the role of deixis and anaphora in discourse, it becomes clear that anaphoric pronouns, tend to be used to indicate a continuous, expected, easily accessible, given, and usually topical referent. Anaphoric demonstratives, however, have been found to suggest discontinuous, unexpected, inaccessible and new referents (Givón 1983; Diessel 1999; Himmelmann 1996)[19].

One aspect present in all of the approaches described above is the role of common ground, i.e. contextual linguistic and extralinguistic knowledge available to the conversation participants. Closely connected to this is the level of ambiguity in a referential expression, as it can be supposed

[18] R-dislocation refers to sentences such as "We saw him yesterday, John", in which the discourse topic is dislocated to the right. L-dislocation, in contrast, involves a mention of the discourse topic at the front (i.e. left) of the sentence, such as in "John, we saw him yesterday" (Examples taken from Givón 1983:5).
[19] Cf Diessel (1999:99) quoting Himmelmann (1996:227): Anaphoric demonstratives "are used for tracking only if other tracking devices fail".

that the more common ground available, i.e. the more information can be assumed to be shared by the speaker and the addressee, the less explicit and the more ambiguous a reference form may be constructed. Common ground can be personal, i.e. shared by a joint experience of the communication participants and/or being created in the communicative situation itself, or communal, i.e. reflecting conventional information (both linguistic and non-linguistic) of a given community and being based on group membership. Importantly, common ground is not to be regarded as a static set of shared knowledge, but rather an essential dynamic process underlying communicative interaction in general. This means that during a conversation, shared knowledge is both mobilised and created.

There are several types of (contextual) knowledge that may be shared in a given communicative interaction (see e.g. Givón 1983; Diessel 1999; Auer 2009)

- Generally shared knowledge in the sense of semantic relations, associations and implications of a word
- Specifically shared knowledge of the particular discourse, including information from
  - the linguistic context
  - extralinguistic context of the speech situation
  - social statuses of the conversation participants
- Specifically shared knowledge of the particular speaker and hearer (also called private or specific information by Diessel (1999) and Himmelmann (2001), respectively)
- Shared cultural knowledge, including information concerning
  - cultural rules of social interaction
  - knowledge of certain subgroups, such as professions, neighbourhood, etc.
  - general shared cultural knowledge, such as e.g. kinship systems, temporal reference, spatial reference, environmental knowledge, or medical knowledge[20]

To some extent these different types of knowledge may be represented by different word forms. Diessel (1999: 106), for example, suggests that at least in English shared cultural knowledge is expressed by a definite article, whereas private/specific knowledge involves recognitional demonstrative determiners. However, as will become clear in the following chapters, there are far more strategies of marking shared cultural knowledge available in both modalities that interact in such a communicative situation.

[20] See e.g. Adone and Maypilama (2014) and Garde (2013) for person reference; Cheikhyhoussef et al. (2011) and Johnson (1992) for environmental knowledge; Durie (2004) for medical knowledge; and Haviland (1993), Le Guen (2011a), Levinson (2003) and Nonaka (2015) for spatial reference being part of shared cultural knowledge in individual communities.

In summary, one can distinguish between several, partially overlapping, notions of information structure. Relational givenness stresses the highlighting/foregrounding versus the backgrounding of information in a sentence. As such, information conveyed by a sentence can be structured according to sentence topic and sentence focus. Furthermore, there are several structural means to highlight or emphasise a topic or a focus, commonly referred to as topicalisation and focalisation. In contrast to relational givenness, referential givenness concerns the discourse status of referents across sentence boundaries. A referent may be new, i.e. initially introduced to the discourse, or given, i.e. already known. Furthermore, speakers and hearers may differ in their perception of a referent as being new or given. This can be related to contextual features, which can be further differentiated according to types of knowledge. Thus, knowledge can be shared by interlocutors due to general social or cultural conventions, but also due to information specifically contributed by the discourse or past events. Information structure is insofar relevant to the analysis of KS reference as it marks individual referents differently according to their information status, either structurally or pragmatically.

2.4 Spatial Reference

One of the key concepts of spatial reference is the distinction between a 'figure', i.e. the entity which is located, and a 'ground', i.e. the entity which is used to locate the figure. Talmy (1983) also refers to them as 'primary' versus 'secondary object' and lists several characteristics: while the figure is movable, smaller and more salient, the ground acting as a reference object is usually not or at least less movable, larger and more backgrounded. Example (2.7) illustrates this distinction:

(2.7)

The cat is sitting next to the barn.

In this example, the entity to be located is *the cat*, whereas the reference entity with the help of which the cat is being located is *the barn*. According to Levinson (2003), the location of a figure with respect to a ground is the usual answer to the Where-question across languages.

Spatial reference concerns different subsections of spatial cognition. Levinson and Wilkins (2006b) distinguish between a 'static' and a 'kinetic' subsection: the static expression of space involves both angular information in the form of Frames of Reference (FoR) and non-angular information in the form of topological relations, whereas the kinetic subsection of spatial reference involves the expression of motion[21]. The way language can be used to describe or refer to these spatial subdomains,

[21] The following analysis concentrates on the static subsection of spatial reference only.

i.e. which lexical and grammatical resources are available, has been shown to differ across languages and cultures (Levinson and Wilkins 2006a). Reference to space can be achieved with the help of various linguistic resources. Pederson (2012: 2612) points to the fact that "no single area in grammar is purely dedicated to spatial expression". Among the word classes that have been found to express spatial content we find demonstratives, adverbs, case marking on both nominals and verbs, adpositions, and relational nouns.

In the non-angular subsection figure and ground are at the same location or at least very close to each other (Levinson and Wilkins 2006b). As a consequence, no coordinate system is required to locate them. Topological relations include reference to coincidence, contiguity, contact and proximity and are constant under rotation due to their non-angular nature (Levinson 2003). Typical word classes that are used to express topological relations are adpositions, case, predicates and nominals and often occur in combination with each other (Levinson and Wilkins 2006a). Spatial deixis is mainly expressed through demonstratives; however other grammatical means are also possible, as the example of derivational affixes in Tamil shows (Pederson 2012). The deictic system may differ across languages in the degrees of proximity being expressed. For example, in English one can express a binary distinction of proximity by the demonstratives *this/here* versus *that*/*there*[22]. While the binary distinction between a proximal versus a distal referent is very common, many languages have a more complex system at their disposal, as for example Spanish, which differentiates between proximal, medial, and distal (Diessel 1999). Moreover, languages may employ different demonstratives for a deictic expression referring to the addressee as opposed to reference to the speaker as an anchor point (e.g. Yélî Dnye as reported by Levinson (2006), or Japanese as reported by Coulmas (1982)). Furthermore, demonstratives may also combine spatial deixis with information on visibility or evidentiality. The many aspects of a demonstrative system can be categorised according to their semantic (deixis, quality), syntactic (category, case, agreement), and pragmatic (use, reference) features (Diessel 1999).

In cases where the figure and ground are neither at the same location nor in close contact, angular spatial reference is expressed with the help of a coordinate system. In an angular setting there are three major strategies to coordinate a figure and a ground, the so-called 'Frames of Reference' (FoR) (Levinson 2003, 1996)[23]. The choice of a predominant strategy has been claimed not only to be expressed in the linguistic domain, but also in non-linguistic cognitive tasks (Majid et al. 2004; Haun et al. 2011; Niraula, Mishra and Dasen 2004). The FoRs differ from each other concerning the following aspects (Danziger 2010; Le Guen 2011a; Levinson 2003): 'allocentricity' vs 'egocentricity'; 'binary' vs

[22] But see Enfield (2003) for a discussion of the illusion of a symmetric expression of proximity, arguing for an entailment scale instead.

[23] Danziger (2010) argues for a fourth FoR – the direct FoR, which is characterised by a combination of egocentric and binary features.

'ternary' setup; and 'felicity under rotation'. The first two features deal with the position of the so-called 'anchor point', a coordinate system that is used to locate a figure with respect to a ground. This coordinate system can either be located in the speaker or a speech participant (egocentric) or it can be located somewhere else (allocentric). Furthermore, the anchor point may be part of the ground, involving only two entities (binary), or it may be distinct to the ground, in which case a third entity besides figure and ground is involved in the spatial reference (ternary). Finally, a description of a spatial array may or may not remain true if the speaker or the figure-ground array is being rotated.

In an 'intrinsic', or 'object-centred', FoR, features of a ground object are used to locate a certain figure. This is illustrated in example (2.8) and figure (2.2)

(2.8)

The pen is at the handle of the cup.

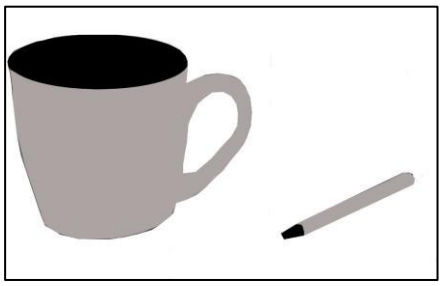


Figure 2.2: Intrinsic Frame of Reference.

Here, *the pen* is the figure which is being located with the help of an inherent feature of a *cup*, i.e. having a handle. The anchor is part of the ground object itself and not located in a speech participant, which is why the intrinsic FoR can be described as binary and allocentric. Furthermore, the proposition in (2.8) will remain true even if the speaker's position changes, the same counts for a rotation of the figure-ground array. Finally, the origo and the anchor may coincide in the same object. This is the case if the speaker himself represents the ground object as in example (2.9).

(2.9)

The pen is at my left.

In the relative, or egocentric, FoR, it is not a feature of the ground object but the speaker's perspective which determines the location of the figure:

(2.10)

The pen is right to the cup.

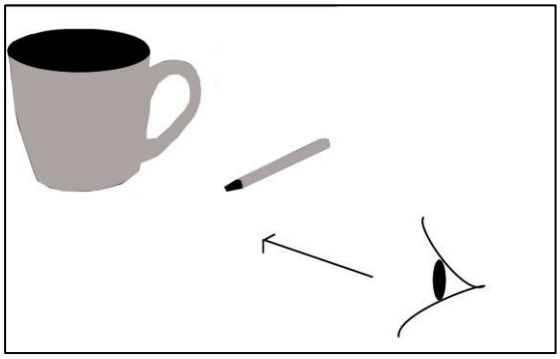


Figure 2.3: Relative Frame of Reference.

The notion of left and right can only be computed if the speaker's perspective is taken into account[24]. In opposition to the intrinsic frame of reference, the proposition does not remain constant if the speaker's position or the figure-ground array is rotated. Since the anchor is located in the speaker (or another speech participant), the 'relative' FoR is egocentric and ternary.

Finally, the 'absolute', or geocentric, frame of reference relates the position of a figure to fixed external features. These features can be for example cardinal direction, uphill-downhill distinctions or wind directions (Haviland 1993; Le Guen 2011b; Levinson 2003). In the case of a cardinal direction, the description of the locations of the cup and the pen could be as follows:

(2.11)

The pen is east of the cup.

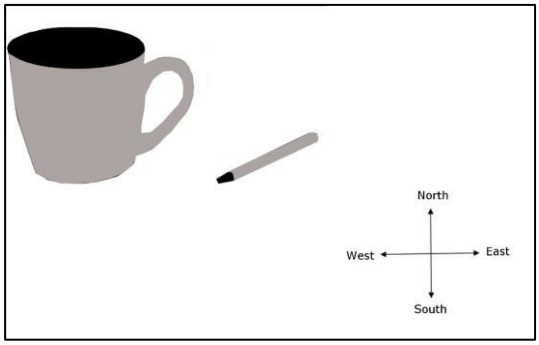


Figure 2.4: Absolute Frame of Reference.

[24] Note that in the intrinsic FoR may also apply the lexical items left and right. However, in this case, they will always refer to the properties of the ground object having a left and a right side, rather than to the speaker's perspective.

In this frame of reference, speaker rotation does not affect the truth value of the proposition. It does not matter in which direction the speaker is looking – the external coordinate system will remain true. However, a rotation of the figure-ground array will have the same effect as in the relative FoR, since the external coordinate system is fixed. Furthermore, the anchor is neither located in a speech participant nor in the ground object, which makes the absolute FoR allocentric and ternary.

While this three-way approach to spatial reference seems quite straightforward, Pederson (2003) lists both theoretical and terminological discrepancies between linguistic and psychological approaches to FoRs. Furthermore, even when limiting the analysis to a linguistic point of view, there are borderline cases that challenge the apparent clear-cut categorical nature of FoRs. For example, in an intrinsic FoR a speaker may function as a ground object (see example (2.9)) and thus change the reference from being strictly allocentric to an allocentric-egocentric mix. Also, the use of a landmark system may constitute a problematic case which mixes the features of the absolute and the intrinsic FoR (Levinson 2003; Pederson 2003). Besides these classificatory shortcomings, linguistic expressions alone often fail to explicitly characterise the FoR which is applied, as illustrated in example (2.12) (Pederson 2003: 289). In this example, the expression 'left' can be used to indicate both a relative and an intrinsic FoR.

(2.12)

a) The cat is to my left. (relative)
b) The cat is to the car's left. (intrinsic)

Finally, there is a high flexibility in the use of FoRs within one and the same language depending on the context and cultural conventions concerning their appropriate use. That is, even though a culture may predominantly use a relative FoR to refer to spatial arrays, a speaker may spontaneously choose another FoR for describing a certain spatial situation. Thus, the three major FoRs proposed by Levinson seem to provide a generalised tripartite approach, which should be complemented by the notions of flexibility and context-dependency, leading to rather "porous boundaries" between the different strategies (Pederson 2012: 2619)

Further criticism comes from Diessel (2014), who argues that deixis conveyed by demonstratives should not be ignored in the analysis of a FoR. He mentions two major arguments for this claim. First, as Pederson (2003) has already hinted at, FoRs can also include deictic components which then may add a certain egocentricity to both intrinsic and absolute conceptualisations. This is illustrated in example (2.13) (Diessel 2014: 120):

(2.13)

a) The ball is in front of the tree. (from the speaker's perspective) (relative +deictic)
b) For John, the ball is in front of the tree. (relative + non-deictic)
c) The ball is in front of me. (intrinsic + deictic)
d) The ball is in front of the chair. (intrinsic +non-deictic)
e) The ball is north of me. (absolute + deictic)
f) The ball is north of the chair. (absolute +non-deictic)

Examples (2.13b), (2.13d) and (2.13f) constitute non-deictic utterances[25] in which the relative, the intrinsic and the absolute FoR are clearly separable. However, in their counterparts, i.e. examples (2.13a), (2.13c) and (2.13e), the inclusion of the speaker adds a deictic element. Thus, in (2.13e), we find a combination of an absolute FoR and a deictic expression, thus adding an egocentric element to the spatial reference. Second, Diessel (2014) draws attention to the necessity of a coordinate system for the correct interpretation of a demonstrative, and thus on the angular nature of deictic expressions. This combination of deictic and angular information may be either explicit in a demonstrative system[26], or implicit in the combination of different modalities, such as the addition of pointing gestures or eye gaze. Thus, deixis may be regarded as an operation always involving an external coordinate system to some extent, which means that this cannot be assumed for the absolute FoR only.

In sum, there are two key distinctions relevant to an overall description of spatial reference: (1) the distinction between figure and ground, (2) the distinction between angular and non-angular relations. The figure-ground distinction differentiates between the entity to be located and the entity or location which anchors the figure in physical space. Figure and ground can be very close or even at the same location, which is why in such non-angular circumstances no additional coordinate system is required to locate the figure. In angular circumstances, i.e. when figure and ground are neither at the same location nor very close to each other, we find three different strategies to successfully convey this relation. In the intrinsic FoR, features of the ground object itself help to locate the figure, whereas in the relative FoR, it is the speaker's perspective from which a coordinate system, such as the notions 'left' and 'right', is projected. Finally, in the absolute FoR, fixed external features, such as cardinal directions, are applied. This distinction of three strategies to express non-angular relations is crucial to the analysis of spatial reference because there is cross-cultural evidence that communities differ in the choice of an individual FoR in their everyday communicative interaction. Nevertheless, it has to be

[25] These three examples are non-deictic, since they involve neither an origo in the sense of I-here-now nor a transposed origo.
[26] Diessel (2014) mentions languages which combine e.g. uphill/downhill distinctions (Dyirbal) or directions along a coast line (West Greenlandic) with deictic information in an elaborate set of demonstratives.

borne in mind that FoRs may also be applied quite flexibly, as is suggested e.g. by borderline expressions.

2.5 Person Reference

Similar to spatial reference, person reference shows great variation across languages and has been investigated across disciplines such as cognitive science, anthropology, and linguistics. The identification and categorisation of individuals takes place in elaborate systems that often involve more than a simple sign – referent relation. In fact, the triangulation between speaker, addressee and referent mentioned above is very explicit in many cases of person reference.

Considering the form of person reference, one can distinguish between names, descriptions, kinship terms, pronominal systems, and case markers. Names seem to fundamentally differ from descriptions in that they establish a direct link to the referent (Kripke 1972), which is conventionally used in individuating a person. Stivers, Enfield and Levinson (2007), however, draw attention to the different cultural conventions in name-giving, which may not always be based on the avoidance of a more costly description as it is the case in Western societies. They mention cases such as Mohawk (see Mithun 1984), where names assume verbal or even sentential instead of nominal characteristics. Beside the overlap with descriptive reference, names, especially clan or family names, may also play an essential part in kinship systems, as will be illustrated below.

Descriptions used as a means of person reference can be subdivided into two types, 'relational' and 'non-relational', both of them appearing in minimised and extended forms (example (2.14)). Relational descriptions not only involve kinship terms, but also other information about a relation between e.g. the addressee and a referent such as in (2.14a/b) or even between two referents external to the conversational interaction, such as in (2.14c), usually expressed by possessive markers. In opposition, non-relational descriptions do not make use of any link between the referent and another person, as is illustrated by (2.14d/e).

(2.14)

a) I saw **your boss** yesterday. (relational, minimal)
b) **Her friend** was in a bad mood. (relational, minimal)
c) **The woman who stood next to me in the elevator** seemed familiar to me. (relational, extended)
d) **The king** entered the room. (non-relational, minimal)
e) **The man on the balcony** was smoking a cigarette. (non-relational, extended)

The information conveyed by pronouns differs considerably across languages. Mühlhäusler (2001) describes their main function as marking the roles of speaker, addressee, and a person non-present to the communicative interaction, being labelled 1st, 2nd and 3rd person respectively. In opposition to spatial deixis, person deixis is conveyed by personal pronouns. Levinson (2004) describes a grid for the analysis of a paradigm of person deixis involving the features 'Speaker', 'Addressee' and their inclusion versus exclusion in a specific form. Further information for which pronouns may be marked are number (e.g. singular, dual, paucal, plural), involvement (inclusive, exclusive), kinship, topic/focus distinctions, animacy or social status. Strategies of marking person reference do not only concern (pro)nominal systems, but also verbal and adjectival systems. Here, inflectional affixes such as person, gender, or number markers may convey information about the person who is associated with a certain action or state. Furthermore, switch-reference systems, such as in Mparntwe Arrernte (Wilkins 1988), make use of morphological markers to select one of several potential referents as a subject of a subordinate clause.

Finally, kinship terms are a special kind of person reference that is located in the interface of linguistics and anthropology. Again, cross-cultural variation far beyond the standard Western systems has been documented. Kinship terms usually consist of a 'propositus', i.e. the person that functions as an anchor, and the referent, which is linked to the propositus via a kinship relation. A major distinction may be drawn between egocentric and altercentric anchoring, with egocentric terms having the speaker as propositus and altercentric terms linking the referent to the addressee or another person (Keesing 1975; Parkin and Stone 2004). Another distinction in kinship terms can be drawn between 'monadic'[27] and 'dyadic' terms. While monadic terms have one referent only, which is then put into a relation with the propositus, dyadic kinship terms refer to both members of a relation, such as husband-wife or parent-child (see e.g. Garde 2013: 59 ff. for an illustration of dyadic kin terms). Finally, there are also reports of languages using triadic kinship terms, such as Bininj Gunwok, in which one term expresses the relation "you are my brother-in-law, my sister, your wife" (Garde 2013: 89). Next to nouns, kinship marking by verbs or by pronominal features have been reported (e.g. Evans 2000; Garde 2013). Kinship systems may be based not only on biological relations, but also on social relations such as clans or on cultural-spiritual relations such as shared totems. Furthermore, there is an overlap with names, such as clan or family names, which then establish a direct link between an individual and a certain social group.

From a functional point of view, these different ways of referring to an individual may be assigned different loci on a continuum between an absolute and a relative Frame of Reference. Similar

[27] Garde (2013) uses the term 'basic kin terms'.

to the use of this terminology in spatial reference, absolute references to individuals establish a direct link between the expression and the referent, as it is for example the case with names. Expressions on the other end of the continuum, i.e. within the relative FoR, involve further associations and a very explicit form of triangulation between speaker, addressee and referent. This is for example the case for kinship terminology. Figure 2.5 shows a generalised realisation of this continuum.

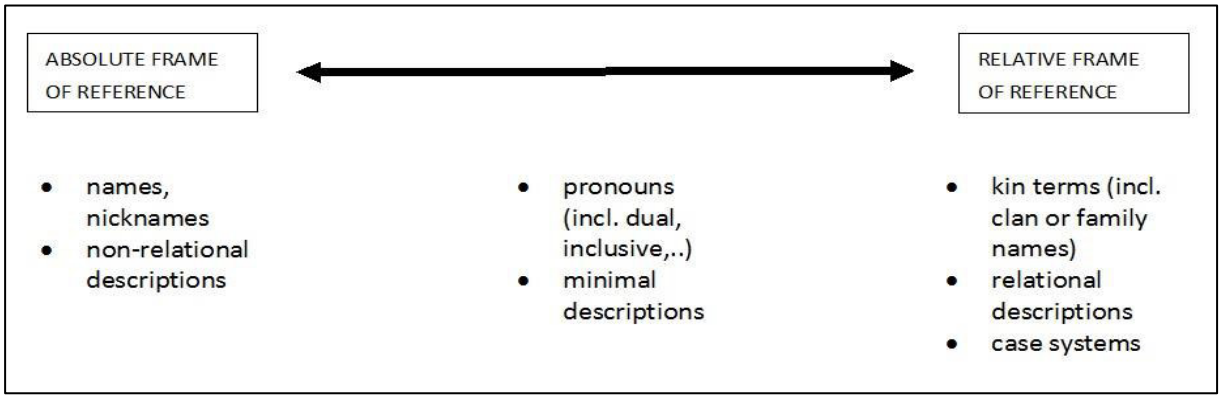


Figure 2.5: The FoR continuum for person reference based on Stivers, Enfield and Levinson (2007).

As Stivers, Enfield and Levinson (2007) note, this continuum not only concerns individual forms of person reference but may also be extended to experss general culture-specific tendencies towards one or the other FoR. According to them (ibid: 18),

> What differs culturally is perhaps the view on a person's individuality. To favour absolute person reference over relative reference is to treat the person as a discrete individual rather than place him or her within the domain of responsibility of any other person or group.

The social interactive and communicative aspect of person reference is also an underlying key feature considering the actual use of referential means in a conversation. Sacks and Schegloff (2007 [1979]) identify two preferences that determine the semantic form of a person reference: the preference for achieving recognition and the preference for minimisation. The preference for achieving recognition suggests the selection of a reference form that "will most readily lead to recognition, by the addressee, of the intended reference" (Enfield 2012: 438). The preference for minimisation involves the reduction of reference forms, i.e. in the words of Sacks and Schegloff (2007 [1979]:24), reference "should preferredly be done with a single reference form". Later accounts further add a social dimension to the two pragmatic principles: the preference for association (Brown 2007; Hanks 2007) as well as a preference for circumspection (Levinson 2007) to this list. The preference for association involves relational reference forms and thus the tendency to choose an expression that is associated with speaker and/or addressee. As such, it may be seen as an extension of the preference for achieving recognition. Finally, the preference for circumspection is a further

illustration of the cross-cultural and cross-linguistic differences underlying person reference. It involves the avoidance of direct reference forms and is thus in conflict with the preference of minimisation. Sociocultural settings such as taboos, gossip or politeness may promote the prominence of this preference (see e.g. Garde 2013; Levinson 2007). As the different contributions in Enfield and Stivers (2007) show, these preferences are differently ranked across cultures. While in English for example the preference for circumspection plays only a minor role, recognition and minimisation are foregrounded, leading to the use of a first name as a preferred form of first reference (Levinson 2007: 68 ff.). On Rossel Island, PNG, however, circumspection plays a very central role and thus competes especially with the preferences of recognition and minimisation, leading to a tendency towards associative relational terms such as kin terms in first mentions of a person (Ibid.).

The application of the preferences of person reference underlies both sociocultural conventions and the context-specificity of the individual communicative interaction. An additional means of reference marking is the choice of a 'marked' or an 'unmarked' form. The unmarked form is the default choice for a referential expression and constitutes the language/culture-specific conventional standard strategy of referring. While Schegloff (1996) regards the unmarked choice as being purely referential, i.e. active on the semantic/pragmatic level only, Enfield (2007) assigns further sociocultural functions to it, such as a representation and reinforcement of both culture-specific views, social values and social hierarchies. Nevertheless, compared to the unmarked default, the choice of a marked, non-standard form of person reference implies an additional layer of information being conveyed, such as foregrounding the (dis)association of the speaker to the referent (see e.g. Stivers 2007). Strategies of marking an expression as non-standard include semantic marking and formal marking, both involving the choice of a more specific form, and pragmatic marking, in which a form is used in an unusual context or an unusual position within discourse (Stivers, Enfield and Levinson 2007).

In sum, person reference is associated with several specific reference forms, such as pronouns, kinship terms or names. Furthermore, relational expressions can be distinguished from non-relational expressions, resulting in two major FoRs for person reference. The relative FoR is expressed by relational expressions, which construct a link between a referent and an interlocutor or another discourse referent. The absolute FoR is expressed by non-relational expressions and is not anchored in interpersonal relations. In addition to this semantic account of person reference, the selection of individual reference forms for initial person reference is guided by four preferences. In social interaction, the preference for association, recognition, minimisation and circumspection have been found to compete with each other. Importantly, there seem to be cross-cultural differences concerning the importance of individual preferences. The analysis of KS person reference in the following chapters thus not only concerns the description of individual reference forms but also the ranking of the four preferences.

2.6 SUMMARY

This chapter has shown that reference is a multifaceted linguistic process. Two special categories of referential expressions are deictic and anaphoric expressions, which can broadly be distinguished according to the two categories exophora and endophora. However, at the same time both deixis and anaphora may be seen as being closely connected to each other, revealing them to be two extremes on a continuum rather than forming two discrete categories. Since reference does not take place in an isolated utterance but within actual interaction, it is subject to linguistic and extralinguistic processes developing within discourse. The choice of reference forms is thus also dependent on the position within discourse, i.e. first versus second mention, as well as on the topicality/givenness versus focus/newness of the individual referent. Also, common ground as a basis and further negotiation within a social communicative interaction has an influence on how explicit or implicit a referent may be mentioned. The approach chosen for this study involves the interaction of three levels: (i) semantic forms, (ii) pragmatic mobilisation of individual reference forms according to contextual circumstances and information packaging, and (iii) the social-interactive level including socio-cultural frameworks and shared cultural knowledge. Furthermore, spatial and person reference have been shown to vary cross-culturally, involving different strategies of establishing reference not only on a semantic/grammatical level, but also on an interactive level. While differences in spatial reference are due to different approaches in anchoring, i.e. the three frames of reference, person reference has been shown to rely on culturally-specific configurations of certain preferences.

3 GESTURE

3.1 INTRODUCTION

Since in this study reference is regarded as a process that involves not only speech, but also gestures, the following chapter provides an introduction to the key notions of gesture studies. Human communication is inherently multimodal, i.e. in normal everyday communication speech is combined with gestures. The study of gesture from a linguistic perspective emerged rather recently. Even though there were some early contributions in the 19th century[28], detailed studies of the nature of gesture were rather rare until the 1960s/1970s. Only after the study of sign language was established as a branch of linguistic research, the interest in gesture increased as well, leading to a growing number of publications in the 1990s and the establishment of an international journal in 2001.

This chapter provides an introduction to the study of gestures. First, basic key notions are introduced, showing that gestures can be distinguished from other bodily movements and described according to a hierarchical structure. In addition to their form features, gestures can be categorised according to their function and their characteristics concerning their relation to speech, the degree of conventionalisation and the degree of referentiality, as well as according to their linguistic and semiotic properties. Furthermore, two theoretical approaches to co-speech gesture interaction are presented. Following this theoretical overview, the category of pointing gestures is further described, since these gestures are considered to be fundamental to human communication. The further subsections then create a link between the study of gesture and the approaches to reference presented in the previous chapter. It is shown that gestures play an important part in reference marking and can also reflect several aspects of information structure. Finally, the chapter closes with a short review of factors leading to variation in gesture across cultures.

[28] see Kendon 2004b for a comprehensive overview.

3.2 KEY NOTIONS IN THE STUDY OF GESTURE

3.2.1 Gestural form features

Gesture can be defined as a "deliberately expressive movement" (Kendon 2004b: 12) and can thus be discriminated from self-regulatory movements such as scratching one's nose which do not convey information contributing to the message communicated. The term 'gesture' is usually applied to arm and hand movements. In addition, eye gaze and other articulators such as the torso or the head may also be used to deliberately express information. A distinction must be made, however, between such alternative articulators and the extralinguistic feature of general body posture. While the former, being deliberately expressive, form some kind of unit with the information conveyed in speech, the latter are expressions of physical, social, or psychological aspects that are part of the context rather than the transmitted message per se. Indeed, one of the most evident characteristics of gestures is their close interaction with speech. Even though gestures – especially pointing gestures – may occur without speech, the majority of instances show an inextricable integration of gestures in the vocal utterance. As such, gestures can contribute to the utterance in adding further information about the referent, but they may also be used to pragmatically structure an utterance. This co-speech interaction is characterised by both co-expressiveness and synchronicity. Together with speech, gestures constitute an idea unit (McNeill 1992; McNeill and Duncan 2000; Kendon 1986, 2004b) whose expression is marked by temporal synchrony in an utterance.

Similar to the description of speech in the previous chapter, gestures may also be analysed according to their form and function. The form of gestures can be described according to two levels: their hierarchical setup in the form of a 'Gesture Unit', 'Gesture Phrase' and 'Gesture Phase'; and their phonetic description according to the approaches used for sign language studies. The hierarchical setup of gestural sequences is loosely based on the threefold distinction of 'Intonation Unit', 'Sentence', and 'Word', however, this is a case of association rather than actual resemblance. A Gesture Unit can be defined as "the period of time between successive rests of the limbs; a G-Unit begins the moment the limb begins to move and ends when it has reached a rest position again" (McNeill 1992: 83). A Gesture Unit can consist of one or several Gesture Phrases, each consisting of one or several phases of movement, i.e. Gesture Phases. There are four different types of Gesture Phases: 'preparation', 'stroke', 'retraction' or 'recovery', and 'hold'. The stroke is the core element of a Gesture Phrase in that it expresses the meaning of a gesture and thus is obligatory. The preparation is the phase starting from a relaxed position and ending right before the stroke, whereas the retraction or recovery follows a stroke and ends in the resting position of the hands again. Preparation and recovery, as well as a hold - where the articulator 'freezes' in a certain position before or after the

stroke – are optional phases. As gestures unfold during an utterance in a dynamic fashion, a Gesture Unit may either consist of one stereotypical Gesture Phrase – Preparation-Stroke-Recovery – or, as it is frequently the case, of several Gesture Phrases that may or may not make use of all optional Gesture Phases. The latter case is illustrated by example (3.1), which is taken from the KS-data collected in 2014. This Gesture Units consists of three Gesture Phrases, indicated by underscores, only one of which displays the standard form of preparation – stroke – recovery. It becomes evident that a Gesture Phrase may also consist of one stroke only.

(3.1)

Preparation – Hold – Stroke – Hold – Stroke – Preparation – Stroke – Recovery

The phonetic description of gestures includes several parameters, which originate in the phonetic description of sign languages (see e.g. Crasborn 2012). Due to the shared modality they are also suited to gesture systems. The parameters are handshape, palm orientation, position of gesture, type and direction of movement, as well as the articulator of the gesture (see e.g. Bressem 2013).

3.2.2 Functional categorisation of gestures

There are several classification schemas according to which different types of gesture may be categorised. The underlying concept is the threefold distinction of Peircean semiotics between index, icon, and symbol, expressing a relation of contiguity, similarity, and convention respectively. Indeed, there are gestures that have a deictic function, gestures that depict objects, and gestures whose forms are arbitrary and subject of cultural convention. However, when taking a closer look at the functions of gestures produced in a conversation, further differentiation is required. McNeill (1992: 78 ff.), for example, presents a classificatory system according to the properties of gestures and divides them into two major classes: 'imagistic' and 'non-imagistic' gestures. The class of imagistic gestures can be further subdivided into 'iconic' and 'metaphoric' gestures. While iconic gestures depict certain properties of a referent, and are thus characterised by a certain extent of similarity to it, metaphoric gestures are imagistic in nature but depict on a more abstract level. McNeill (1992:80) gives the example of a cupped hand representing the abstract entity of a question with the help of the metaphorical iconic imagery of a question being something that can be handed to someone. In the class of non-imagistic gestures, McNeill mentions deictics, i.e. pointing gestures, and beats, i.e. rhythmic gestures that can be used to e.g. emphasise a certain word.

Another approach, Kendon's (expanded) continuum (Kendon 1988; Gullberg 1998; McNeill 1998, 2000b), consists of several scales according to which gestures may be categorised (Figures 3.1-

3.5). The first continuum, which is the original continuum suggested by Kendon (1988), concerns the relation of a gesture to speech (Figure 3.1). On the one hand, there are gestures, whose meaning cannot be retrieved without the speech-counterpart. On the other hand, in the case of pantomime and sign language, presence of speech is not required – rather its absence is seen as obligatory.

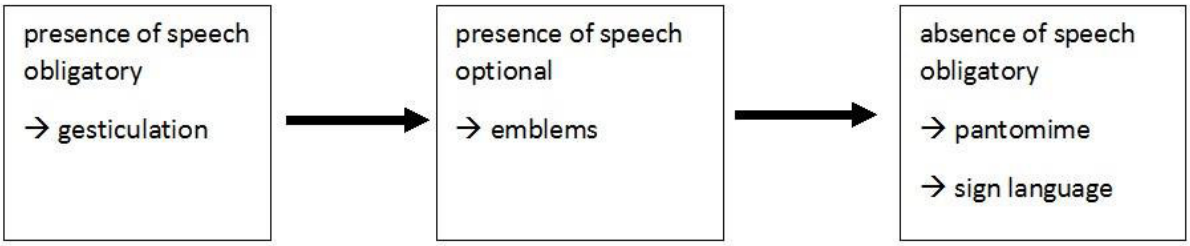


Figure 3.1: Continuum 1 – Relation to speech (McNeill 2000b: 2).

This continuum was expanded by Gullberg (1998) who added a scale to further subdivide what Kendon calls 'gesticulation' according to the referential properties of individual gesture types (Figure 3.2).

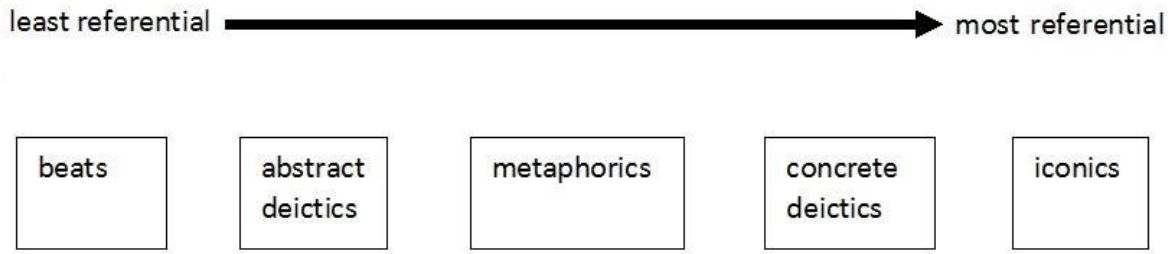


Figure 3.2: Continuum 2 – Referentiality (Gullberg 1998: 96).

Next to Gullberg's expansion, McNeill (2000b) lists three further additional scales complementing Kendon's original continuum. In addition to a differentiation according to their relation to speech, gestures can also be categorised according to their linguistic properties (Figure 3.3). He defines linguistic properties according to constraints of phonological form, morphemicity and the possibility of syntactic combination (Ibid.: 3f.).

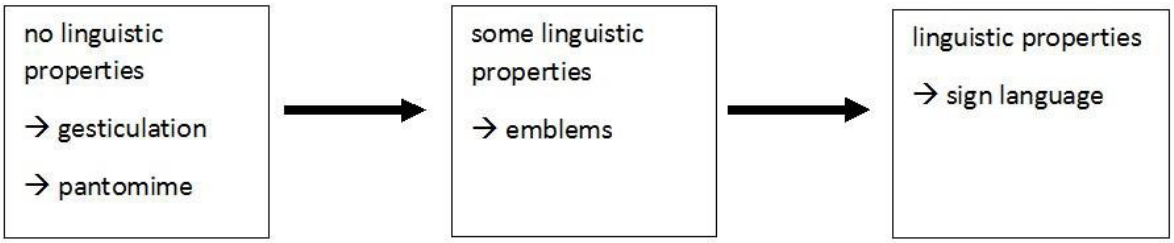


Figure 3.3: Continuum 3 – Linguistic properties (McNeill 2000b: 3f.).

A further continuum is the degree of conventionalisation (Figure 3.4). Again we find gesticulation at the left-most end of the continuum, in this case representing the least conventionalised gesture type. 'Emblems', such as the 'OK' gesture, are conventionalised to some degree, but not as much as the individual signs of a sign language system.

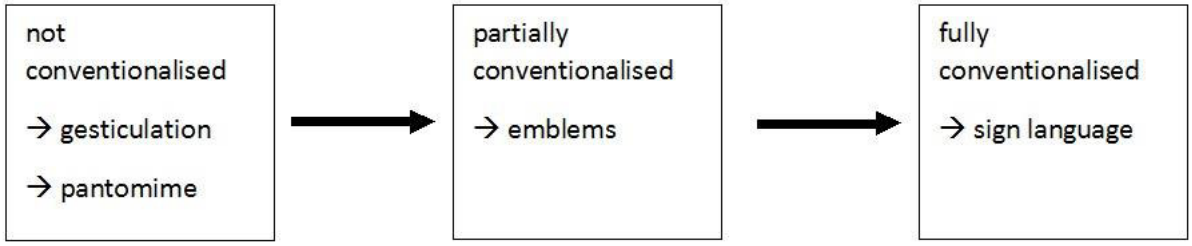


Figure 3.4: Continuum 4 – Conventionalisation (McNeill 2000b: 4f.).

Finally, the last continuum added to Kendon's original one is a gesture's "character of semiosis" (McNeill 2000b: 5f.), which is illustrated in Figure 3.5. There are two pairs of converse characteristics – 'global' versus 'segmented' and 'synthetic' versus 'analytic' (McNeill 1992, 1998). The first pair, global versus segmented, displays two different ways of creating meaning: in the global process the meaning of individual parts are determined by the global meaning of the whole, while in the segmented process meaning is created in a bottom-to-top fashion by the combination of individual segments. The second pair, synthetic versus analytic, concerns the distribution of meaning to individual units. In the synthetic option, different units of meaning converge in one gesture, which again may be distributed across a sentence. The analytic option, on the other hand, assigns one meaning unit to one symbol, as it is the case in spoken and signed languages.

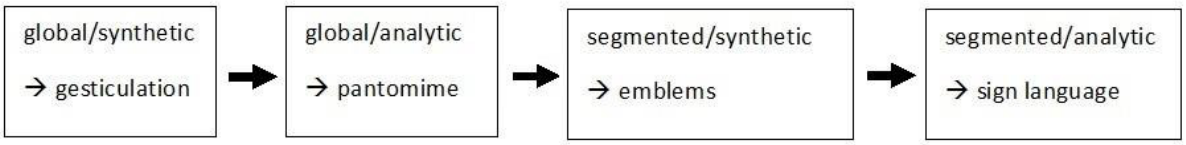


Figure 3.5: Continuum 5 – Semiotic properties (McNeill 2000b: 5f.).

In opposition to the classificatory systems above, one can also categorise gesture types according to their function with regards to the speech unit they accompany. Kendon (2004b: 158 ff.) differentiates between three major functions: referential, pragmatic, and interactive. Referential gestures include pointing gestures and also representational gestures, i.e. iconic gestures that either depict, enact or model a referent. Pragmatic gestures, on the other hand, can be divided into modal, performative and parsing gestures. Kendon (2004b: 159) describes modal gestures as "[…] alter[ing] in some way the frame in terms of which what is being said in the utterance is to be interpreted", whereas performatives are closely connected to individual speech acts. Parsing gestures highlight certain aspects of discourse, such as representing aspects of information structure. Finally, interactive gestures may be used to regulate turn-taking in a conversation or to indicate addressees.

In sum, gestures cannot only be described according to their form features, but also according to their relative position in Kendon's expanded continuum and their overall function. Such a 'linguistic' perspective on gestures (Bressem 2013; Bressem, Ladewig and Müller 2013) constitutes the basis of a systematic description of KS gestures. In addition to this descriptive account, however, the interaction of gesture and speech needs to be embedded in an overall theoretical framework, which is considered in the following section.

3.3 Theoretical Approaches to Co-Speech Gesture Interaction

There are two major theoretical accounts of the relationship between gesture and speech. One considers gesture and speech to originate in one underlying cognitive unit, but to be processed in different pathways (McNeill 2013, 1992; McNeill and Duncan 2000; Beattie 2003). The other approach regards gesture and speech as being planned together in order to express a communicative intent (Kendon 2004b, 1986; de Ruiter 2000; Melinger and Levelt 2004). De Ruiter (2007) calls the former approach a 'Window Architecture', emphasising the underlying idea that (imagistic) gestures provide a window through which cognitive processes can be directly observed. He refers to the latter approach as 'Postcard Architecture', according to which the multimodal message displays a combination of gestural and vocal information, which then indicates the underlying combinatory mechanisms of the mind (Ibid.).

3.3.1 The 'Window Architecture'

The 'Window Architecture' (McNeill 1992, 2013; McNeill and Duncan 2000; Beattie 2003) assumes a core unit consisting of two essential components that are active in the composition of a multimodal utterance – a categorical and an imagistic component. The categorical component is represented by language, i.e. in the case of multimodal communication by speech, and is characterised by compositional, analytic and combinatoric values. The imagistic component, on the other hand, is global, synthetic and additive[29]. McNeill (1992; McNeill and Duncan 2000) suggests an underlying psychological unit, which he calls 'Growth Point'. Referring to Vygotsky (1987) the Growth Point is "the smallest unit […] that retains the essential properties of a whole, in our case the whole of an image and a linguistically codified meaning category, such as we see in the speech-gesture window" (McNeill and Duncan 2000: 144). The Growth Point is of dual structure, combining both imagistic and categorical aspects, and has been described as being "the mediating link between individual cognition and the language system" (Ibid.: 146). As such, the idea unit or psychological predicate is the starting point from which the multimodal utterance develops, a process McNeill refers to as 'unpacking' a Growth Point. However, while speech and gesture are assumed to form one cognitive unit at the beginning, their paths diverge with further unpacking. The categorical component of the Growth Point is assumed to undergo processes transforming it according to the linguistic characteristics of compositionality, analytic meaning and combinatorics values within a hierarchical system, eventually resulting in vocal part of an utterance. In contrast, the imagistic component remains mainly unchanged and displays the global, synthetic and additive features inherent to gesticulation[30]. Thus, further processing is not necessary in order to result in the expression of the gestural part of an utterance, in contrast to phonological or grammatical operations in speech. McNeill supports this hypothesis by instances where gestures convey information the speaker did not necessarily want to communicate. While the 'unwanted' information has been filtered from speech through the further sections of processing, gestures do not undergo selection and straightforwardly convey the originally intended cognitive content.

[29] See also the three continua McNeill (2000b) has added to Kendon's continuum.

[30] Note that this approach considers imagistic gestures as a form of gesticulations only. Emblems and sign languages, being located towards the other extreme of the continua, are excluded.

3.3.2 The 'Postcard Architecture'

The 'Postcard Architecture', in contrast, regards speech and language to be processed together to some extent, starting again from a single idea unit. Kendon (1986: 12) further distances himself from a purely psychological approach and considers gesture to "[…] arise[…] as an integral part of an individual's communicative effort [which] has a direct role to play in this process". As such, both gesture and speech are assumed to originate together in thought and to be further processed together in the formation of a communicative intention. In other words, gesture "[…] constitutes a consequence of the process of the translation of 'thought' into utterance, of which speech is another consequence" (Ibid.). By integrating gesture and speech in the process of planning an utterance, Kendon switches the point of view from a cognitive imagistic thought towards the communicative function of a multimodal utterance. As a consequence, the ensemble of gesture and speech is regarded as the final product of a speaker's communicative intention (Kendon 2004b, 2000, 1986). De Ruiter (2007) lists two pieces of evidence for this view: not only is speech more explicit when gestures do not occur, but also do the co-expressiveness and synchrony of gesture and speech indicate a planning process that considers both communicative components. His 'Sketch Model' (de Ruiter 2000) approaches the 'Postcard Architecture' from a processing point of view and revolves around a module called the 'conceptualiser', which generates a preverbal message and a gestural sketch out of a communicative intention. Thus, in opposition to the 'Window Architecture', there is a central process, which is responsible for planning gestural and vocal output together. The preverbal message then serves as input to a 'formulator', whereas the sketch is further processed by a 'gesture planner'.

In summary, both approaches regard utterances as being "a communicative act consisting of a speech-gesture ensemble expressing related content" (Williams 2013: 241). However, they differ in their view of the two components involved in multimodal communication: while McNeill's Window Architecture regards the Growth Point as a single starting point from which both gesture and speech develop independently, Kendon's Postcard Architecture treats gesture and speech as two processes that are planned together to form one multimodal utterance (de Ruiter 2007). In this thesis, Kendon's approach is applied due to several reasons. A shared computational process planning the multimodal product can account best for the temporal and semantic coordination of speech and gesture (de Ruiter 2000). Furthermore, there seems to be a clear audience effect in multimodal communication, meaning that gestures are produced differently when the addressee cannot see the speaker (Alibali, Heath and Myers 2001). Conversely, Holler, Tutton and Wilkin (2011) found that in a communicative interaction where both interlocutors are visible, gestures were produced in a manner as to enhance visibility for the addressee. Thus, gestures seem to be adapted to the individual context of communication, which again suggests an underlying communicative intention.

3.4 POINTING GESTURES

Pointing gestures constitute a special category of gestures. They occur early in ontogeny, often preceding the production of the first words (Butterworth 2003; Colonnesi et al. 2010; Kita 2003; Liszkowski 2010; Liszkowski, Carpenter and Tomasello 2007). Furthermore, they can be regarded as "meaningful act [which is constituted] through the mutual contextualization of a range of different kinds of semiotic resources", involving not only the speaker's body, but also joint attention of the speaker and the addressee, as well as the environmental properties in which the referent of a pointing gesture is located (Goodwin 2000: 67). As such, pointing gestures not only constitute a referential act, but are also inherently interactive and can thus mediate social relations (see also Kendon 2004b; Enfield, Kita and Ruiter 2007). Furthermore, as a fundamental means of expressing deictic relations, pointing gestures are deeply grounded in the physical environment and thus are an instance of "situated interactive activity" (Goodwin 2003: 218).

This multitude of functions and roles of pointing gestures in a communicative interaction leads to their distribution across various levels in Kendon's expanded continuum. In Continuum 1 (Figure 3.1), pointing gestures can be found to highly depend on the co-articulated speech, as it is the case in metaphoric pointing, but they can also be independent of speech in direct pointing. Furthermore, sign languages make use of pointing gestures in a grammaticalised form as well (e.g. Engberg-Pedersen 2003; Morgan 1994). The same can be said about Continuum 2 (Figure 3.2), where Gullberg (1998) lists abstract deictic gestures as being less referential and concrete deictic gestures as being more referential. In Continuum 3, we find pointing gestures to exhibit non-linguistic properties (Figure 3.3). However there are also cases which are characterised by fixed formal constraints concerning their phonetic form according to their lexical function. Furthermore, in the case of sign languages there are also grammatical features restricting the form of pointing gestures (e.g. Engberg-Pedersen 2003). Similarly, Continuum 4 (Figure 3.4) contains non-conventionalised forms of pointing as well as highly conventionalised ones (e.g. Wilkins 2003; Kendon 2004b; Levinson 2003). Continuum 5, describing the character of semiosis, seems to contain pointing gestures only at the global-synthetic level (Figure 3.5)

The variability of pointing gestures is also reflected in both their form and function. While the extended index finger seems to be the default form, which has even been suggested by some to be universal (e.g., Povinelli and Davis 1994; Butterworth 2003), other forms, some of which are often highly conventionalised, have been reported as well. Wilkins (2003), for example, mentions at least five communities in which lip pointing is a conventionally used deictic device[31]. He further reports three semantically and functionally different forms of pointing gestures in Arrernte: one finger points, flat-

[31] See also Enfield (2001) for lip pointing in Laos. D. Adone (p.c.) has also reported lip pointing to be used by Indigenous communities in N.T., Australia.

hand points and wide-hand points, with the one finger pointing category including several allomorphic forms. Similarly, Kendon (2004b: 205 ff.) describes six different pointing gestures he observed in Campania. Furthermore, eye gaze has been found to be used in a deictic fashion as well as elbow pointing. While they may be used in a conventionalised fashion, as it is the case for eye gaze in e.g. Arrernte (Wilkins 2003) and elbow pointing in Yolŋu Sign Language (Adone and Maypilama 2014a), the data analysed in the following chapters suggests that in Kreol Seselwa these alternate articulators are also used in cases where the hands are impeded by e.g. holding an object.

The different functions of pointing gestures may be categorised into three groups: 'referential', 'pragmatic', or 'socially mediating'. Referential pointing gestures are directed towards specific referents in an utterance and can undergo certain levels of abstraction. Direct pointing is the standard case of deixis, i.e. an origo is being established in the speaker's body and a vector is projected by means of the extended finger or arm ending at the location of the referent in the present surroundings. On a second level of abstraction, metonymic pointing still makes use of (visible) elements in the surroundings of the communicative interaction, but the intended referent itself is not present. The reference point, i.e. the location or entity towards which the pointing gesture is directed in this case, is closely connected to the referent. In the data collected on Kreol Seselwa, for example, one participant referred to another non-present participant by pointing towards her office door. Of course, metonymic pointing can only be understood correctly if both interlocutors share some knowledge about the connection between referent and reference point. The third level of abstraction, metaphorical pointing, does not involve any interaction with a referent or another entity closely connected to it. Rather, this highly abstract gesture points to empty, neutral and arbitrary space (Stukenbrock 2014; Barberà and Zwets 2013). This form is often used in sign languages where specific loci in the signing space are assigned to represent individual referents (Barberà and Zwets 2013; Engberg-Pedersen 2003; Morgan 1994). A similar connection between neutral space and a certain referent can be found in co-speech gestures, even though not always as systematically as in sign languages. In co-speech gesture systems, this type of pointing is used to refer to either abstract concepts or absent referents (Le Guen 2011a; Stukenbrock 2014). Finally, pointing gestures may also assume both metaphorically indexical and iconic functions at the same time. Kendon (2004b: 202) gives an example where metaphorical pointing gestures are combined with an iconic element to enact certain movement or modelling a referent or trajectory in combination with direct pointing to a reference point. Kendon (2004b: 203) refers to this semiotically mixed form as "a descriptive gesture with a strong indexical inflection".

On pragmatic level, Enfield, Kita and Ruiter (2007) describe two pointing gestures in Laos which reflect pragmatic aspects of reference resolution. 'Big Pointing' is used referentially on a narrative level, indicating informationally foregrounded referents. 'Small Pointing', on the other hand, is used

for several functions, accompanying requests for or supply of clarification, very general reference forms as well as the introduction of a new recognitional term – in other words in cases "where the referent seems likely but not certain to be recognizable for these interlocutors in this context" (Enfield, Kita and Ruiter 2007: 1730). Similarly, Kendon (2004b: 208 ff.) identifies different variations of the open hand gesture as well as thumb pointing in Campania, which are associated with backgrounded referents. Finally, on an interactive level, pointing gestures may be used by a speaker to hold the floor or invite an interlocutor to take their turn. Also, metonymic pointing gestures may be used to draw the attention to a conversation participant, signalling relational links between an interlocutor and a referent and thus triggering not only attentional but also interpersonal and social processes.

In sum, pointing gestures are distinguished from other gestural categories because they occur early in ontogeny, and cannot always be clearly assigned to a specific locus in Kendon's expanded continuum. Furthermore, pointing gestures may undergo several levels of abstraction and assume metonymic and metaphorical functions. Moreover, several studies have shown that pointing gestures can also fulfil pragmatic and interactive functions. This variability in function and the various characteristics of pointing gestures are also reflected in the analysis of the KS reference system. In this study, it is shown that the pointing gesture occurs across gesture types and assumes several key functions beyond mere reference, such as expressing shared knowledge.

3.5 Gesture and Reference

As has been mentioned above, gestures may differ in their degree of referentiality, and even those gestures which can clearly be diagnosed of conveying referential meaning achieve this function with the help of different strategies. Obviously straightforward candidates for referential meaning are imagistic gestures. Iconic gestures, which are characterised by their similarity to a referent, deliver information about e.g. the shape of an object or the action which is being performed. The different modes of representations, according to (Müller 1998), are drawing, molding, acting, and representing. Mittelberg (2013) assigns adverbial and adjectival functions to such gestures as they convey certain selected features of a given referent or action. Fricke (2013) further draws the distinction between 'object-related' and 'interpretant-related' gestures. The former are iconic gestures that relate to the referent whereas the latter are gestures that illustrate the stereotypical meaning or concept a speaker associates with a certain word. Metaphorical gestures, which are also imagistic, do not select certain aspects of a concrete referent, but rather illustrate abstract concepts. Furthermore, metaphorical gestures may be used to present a concept or also a referent to the interlocutor as what Kendon (2004b) calls 'specimen' or 'exhibit'.

Besides iconic gestures, speech may be accompanied by 'Narrow Gloss Gestures', i.e. conventionalised, emblematic gestures (Ibid.). In some cases, the information conveyed by these gestures is equivalent to what is conveyed with speech. In this case they constitute an additional referential form supporting the message conveyed by speech. In another case, however, these gestures may add another component of information associated with specification or indication of a general concept[32]. Finally, pointing gestures, as already described above, can also be used to establish reference both to present and absent referents.

Spatial reference expressed by gestures has been subject to various studies (e.g.Danziger 2010; Haviland 1993; Le Guen 2011a, 2011b; Levinson 2003; Majid et al. 2004; Wilkins 2003). Next to different semiotic modes, such as pointing to locations or iconically modelling a path, one of the most crucial findings has been that the different Frames of Reference mentioned in section 2.4 are also represented in the gesture system. When a pointing gesture is applied in order to specify spatial referents, such as in direction-giving and spatial reference to places not visible to the addressee, it may undergo the act of transposition. In a transposed setting, the origo, i.e. the starting point of the pointing gesture, is not the body of the gesturer, since the location of the speaker is not the same location that is being referred to (Le Guen 2011a). Thus, it is necessary to create a secondary origo within the intended spatial area which can then serve as the starting point of a pointing gesture. According to Le Guen (2011a), this is the situation where the FoRs come into action. Levinson (2003: 244 ff.) argues for specific gestural features within an absolute FoR that differ from those within a relative FoR in terms of phonetics, semiotics, and referential content.

Concerning the phonetics of an absolute gesture system, Levinson reports the use of extended gesture space, the absence of a dominant articulator, as well as a reduction of body torque to only those cases where biomechanics require it. Furthermore, in an absolute framework spatially referential gestures seem to follow what he terms 'natural' lines: the further away a referent is located, the higher in space the gesture is performed. Also, there seems to be a certain distribution of handshapes, with index pointing usually referring to locations whereas flat hand pointing is mainly associated with vectors (see also Wilkins 2003). Finally, on a phonological level, eye gaze does not necessarily follow the pointing gesture as it is often the case in a relative FoR. Rather, the two are considered to be independent from each other. On a referential level, absolute gestures have often been reported to merge complex vectors in one gesture. Thus, a gesture may not only indicate the direction of a referent by the vector projected by the arm, but also convey additional information about the orientation of that referent by e.g. the bent hand signalling an angle. The most striking feature of absolute gesture systems, however, is the veracity of not only pointing gestures but also

[32] See e.g. Ebert's (2013) discussion of gestures conveying secondary, non-at-issue information as opposed to the primary, at-issue information expressed in speech.

path segments or maps conveyed by gestures. According to Levinson (2003: 248), in speakers of languages employing the absolute FoR "[w]herever an orientation-bound gestural depiction is discernible, an absolute […] conceptual coordinate system is employed in at least the great majority of ordinary gestures, across a range of contexts, by most speakers of the community". This means that, in accordance with the anchoring of an absolute FoR in an external coordinate system, those gestures are produced in such a manner as to being exactly oriented towards the direction of a referent. This is regardless of whether the referent is visible or invisible and may concern not only explicit spatial reference but also person reference. This veracity of indexical vectors projected by gestural features has further been shown to remain constant under rotation. Following from this is the feature added by Le Guen (2011a) that in an absolute gesture system metaphorical pointing is absent. This makes sense taking into account the veracity of pointing: all pointing gestures produced in an absolute FoR are instances of direct pointing: the vectors projected by the articulator is always directed towards the actual or associated location of the referent. In a relative FoR metaphorical pointing is very common, as is illustrated by rotation tasks in which the left-right distinction of spatial arrays is rotated with the speaker thus leading to a mirror image of the gestures produced before the rotation. Closely connected to the veracity of pointing is the semiotic fusion of iconic and deictic gestures, which is very common in absolute gesture systems. Levinson (2003: 261) gives the example of Tzeltal speakers referring deictically to the former location of a church, with the bent fingertip simultaneously signalling the destruction of the church tower in an iconic fashion. Similarly, Haviland (1993) analysed locally-anchored narrations in Guugu Yimidhirr and documented gestures in which e.g. the path of a referent was indicated by the direction of gestural movement, whereas the orientation of the referent was simultaneously encoded in the palm orientation of the hand. These phonological and semiotic characteristics constitute a very important tool to diagnose the use of a FoR in a given language, and are of high importance in the analysis of KS spatial reference in chapter 8 and 9.

In contrast to spatial reference, studies investigating gestural person reference have been scattered across areas such as information structure, discourse and reference-tracking and will thus be considered in the following subchapter. In addition to these areas, socio-cultural constraints on person reference often judge direct pointing gestures, especially larger ones involving the index finger, to be very informal or even impolite. Moreover, in communities where the preference for circumspection plays an important rule, indexical gestures towards individuals may often be reduced or omitted. Adone (p.c.) for example reports the switch to eye gaze or lip pointing, which are more discrete and less visible, as a result of circumspection in Indigenous communities in Arnhem Land, N.T., Australia. A further connection between person reference and pointing gestures may also be assumed regarding the findings of Enfield, Kita and Ruiter (2007) who, as mentioned above, associate the small

pointing gesture with the introduction of a recognitional, a strategy which plays an important role in person reference.

3.6 Discourse, Information Structure and Gestures

As already described above, gestures may not only assume a referential function but also serve pragmatic purposes. Moreover, these two functions are often merged as it is the case in speech. One indication of information structure being encoded in gestures has already been described above: speakers in Laos employ two different kinds of pointing, Big Pointing and Small Pointing, according to the status of information in an utterance (Enfield, Kita and Ruiter 2007). Big Pointing is associated with informationally foregrounded information, i.e. marking focus. Moreover, this kind of pointing is associated with the narrative level (McNeill, Cassell and Levy 1993) and thus simultaneously establishes clear and visible reference. Small Pointing, on the other hand, serves a more mixed function. These pointing gestures also help to reduce the ambiguity of a reference in that they are used for clarification, supporting the reference provided by speech and adding general backgrounded information. Thus, they serve the overall pragmatic preference of achieving recognition, which is why they often accompany the introduction of new recognitional terms. However, in terms of information structure, they seem to appear with both newly introduced and foregrounded referents as well as with discourse-given, backgrounded referents. In the latter case the re-introduction of a referent and/or the speaker's uncertainty whether these referents can indeed be treated as given seem to be the major trigger for these gestures in the sense of adding secondary information as mentioned above.

Taking a closer look at the semiotics of gestures, Wilkin and Holler (2011) found that definite reference, indicating given information status as well as the activation of 'common ground', was more often accompanied by gestures iconically representing an action. Indefinite reference, indicating a newly introduced referent, in contrast, were more often accompanied by so-called entity gestures, which in this case were mainly metaphorical pointing gestures. Thus, an association of common ground with iconic gestures and non-common ground with metaphorical pointing gestures could be found, adding a semiotic dimension to gestural sensitivity to information structure. Furthermore, Foraker (2011) found that whether a referent is mentioned the first time or subsequently also changes the semantics of the speech-gesture relations. In her study, gestures displaying redundant information were associated with first mentions, whereas subsequent mentions of a referent were often accompanied by complementing gestures, adding additional information to the reference. However, other studies investigating the occurrence of gestures in association with different information statuses draw a rather mixed picture. On the one hand, there are studies reporting the introduction of

a referent, i.e. new information, to be accompanied by an increased use of gestures, whereas subsequent mentions are associated with less gestures (Levy and McNeill 1992; McNeill 1992; McNeill, Cassell and Levy 1993). On the other hand, Holler and Wilkin (2009) found an increase of gesture rate accompanying common ground information. Concerning their semantic content, Parrill (2010) found gestures to be less informative when co-occurring with common ground information, whereas other studies (Holler, Tutton and Wilkin 2011; Holler and Wilkin 2009) again delivered contradictory results. This mixed picture may be due to culture- and language specific differences as well as the different methods used in the individual studies. Nevertheless, the collective outcome of these studies seems to be that the gestural system is sensitive to the information structure of the speech counterpart and that the reaction to this situation seems to depend on further factors yet to be identified. A similar sensitivity can be found in studies concerning second language learners, in which information structure in second language discourse has been found to display parallel effects in both speech and gesture (e.g. Gullberg 1998, 2006; Yoshioka 2008).

As for reference-tracking across discourse, gestures have been shown to play an important role as well. Levy and McNeill (1992) as well as McNeill (2000a) have shown that gestures are used to establish cohesion across discourse by marking referents. The tracking of referents in the gestural modality takes place by repetition of a gesture or so-called 'catchments', the "recurrence of gesture features over a stretch of discourse" (McNeill 2000a: 316). A catchment can occur by repeating form features of a gesture whenever an associated referent is uttered in speech. These can be handshapes, movement patterns, or loci of gesture production. Navarretta (2011) for example found that gestures related to both antecedents and their anaphors displayed similar shapes. Furthermore, in sign languages metaphorical pointing is used in grammaticalised form to establish person reference in association with a certain locus in signing space (see e.g. Morgan 1994; Engberg-Pedersen 2003; Barberà and Zwets 2013) and similar functions have also been reported for co-speech gestures (So, Kita and Goldin-Meadow 2009). In addition to metaphorical pointing, metonymic pointing may also be used to track a referent by anchoring the reference in the immediate communicative environment and thus giving additional information about an anaphoric expression in speech.

3.7 Variation in Gesture

Given their optionality in a communicative situation as well as their global, synthetic and imagistic nature, gestures are extraordinarily flexible and vary on different levels. Obviously, the context of an utterance plays a large role. As has been described in the subsections above, gestural form and function may change according to information structure, the availability of common ground and shared

activity. Furthermore, a distinction must be drawn between gestures that function on a 'narrative' level and gestures on a 'supranarrative', i.e. paranarrative or the metanarrative, level (McNeill, Cassell and Levy 1993). In addition to contextual flexibility, gesture use is also highly idiosyncratic in that there is a great deal of individual variation involved in their production. Common intuition indicates that some people simply gesture more than others, thus being a part of a person's idiolect among prosodic or lexical tendencies.

An important factor responsible for variation in gesture production are the socio-cultural and linguistic conventions of a certain community[33]. In his seminal work investigating the gestures produced by Jewish and Italian New Yorkers, Efron (1972) found striking differences not only in the form but also in the semantics and semiotics of the gestures used by the different groups. Similarly, Kendon (2004a, 2004b) investigated the gestural inventory of speakers in Naples and compared them to British speakers. He also reports cross-cultural variation on all levels of gesture use. These cross-cultural differences not only concern emblems, i.e. symbolic gestures most similar to a word, but also form and function of pointing and iconic gestures. Similarly, Nyst (2016) found differences in the form features of iconic gestures produced by Anyi and Dutch speakers. Further studies confirming cross-cultural variation of gesture systems focus on their alignment with differences in linguistic and conceptional coding. Motion events, for example, may be encoded differently across languages. Experimental data showed that the preference of a language for packaging information about path and manner of a motion event was also paralleled in the gestural setup (Kita and Özyürek 2003; Özyürek et al. 2005; Özyürek and Kita 1999, amongst others). Similarly, conceptualisations of spatial arrays, as has been described in section 2.4, have been found to be expressed in both gestures and speech (Le Guen 2011a; Levinson 2003; Wilkins 2003; Haviland 1993). Furthermore, social conventions such as circumspection and taboos in reference can influence gesture form and function, as examples from Aboriginal communities in Australia (Adone and Maypilama 2014a, 2014b) or communities in Ghana (Kita and Essegbey 2001) suggest.

[33] See Kita (2009) for a detailed overview.

3.8 SUMMARY

There are three main characteristics that define gestures: they can be considered to be deliberately expressive movements, they are co-expressive with their counterpart in speech, and they usually occur synchronous with it. Similar to speech, gestures can be analysed according to both their form and function, as well as their interaction with socio-cultural conventions. On the form level, gestures are organised hierarchically into a Gesture Unit, consisting of one or more Gesture Phrases, which again may consist of one or more Gesture Phases, i.e. the obligatory stroke and the optional preparation, hold, and recovery/retraction phases. Furthermore, gestures can be described according to the phonetic features developed for sign languages, such as articulator, handshape, palm orientation, movement type and direction, and position. On a functional-semantic level, different classification schemes have been proposed, including categorisations according to their properties, i.e. several continua, or according to their functions in relation to speech. The pointing gesture has been found to be special in that it can be found on different levels of the continua and also may assume a variety of functions including beat-like modulation of speech, establishment of reference in both direct and abstract ways, and pragmatic indication of reference status.

Two major theoretical approaches to co-speech gesture interaction have been presented: McNeill's Window Architecture, which argues for a common psychological unit of gesture and speech and a subsequent processing path for speech, and Kendon's Postcard Architecture, which argues for both a common basis and a common multimodal processing pathway.

Reference can be achieved by gestures in several ways. Iconic, emblematic and pointing gestures have been shown to contribute to referential expressions by delivering either redundant or additional information. In addition to their referential function, gestures are also sensitive to some pragmatic operations in discourse. Information structure has been shown to influence gesture form and rate, but the exact patterns of this interaction have not yet been identified and appear to be subject to interpersonal and cross-cultural variation. Furthermore, gestures have been found to contribute to processes of reference-tracking by catchments, i.e. recurring form features. Finally, variation of gesture use can be traced back to contextual, individual, cross-linguistic, cross-cultural and conceptual factors, emphasising that these deliberately expressive movements are part of a complex, multimodal system of communication.

As such this chapter has provided both analytic instruments and the theoretical basis for the study of the KS gesture system. Furthermore, the cross-cultural and cross-linguistic differences in gesture use described in this chapter fit into the tripartite approach to reference, by including not only semantic and pragmatic, but also cultural factors in the analysis.

4 CULTURE AND COMMUNICATION

4.1 INTRODUCTION

An investigation of the interaction between culture and communication requires a definition and characterisation of the term 'culture' itself, and it becomes clear very quickly that there is a multitude of approaches available, reflecting different schools of thought. A summary of the essential aspects associated with the conceptualisation of culture across theories is given by Michael (2011: 121)[34], who lists two defining features:

1. culture is a learned body of behaviours and/or knowledge transmitted by transgenerational learning; and
2. this body is predicated primarily of human groups and, only through membership in a group, of individuals

While there are many different approaches to the notion of culture[35], only three will be outlined here: Cognitive Anthropology, Symbolic Anthropology and Practice Theory. Cognitive Anthropology focuses on culture as a network of knowledge and conceptual meanings and has its roots in the structuralist school of thought. This origin is shared by Symbolic Anthropology, accounts of which, however, regard culture as a network of symbols. Finally, Practice Theory is based on the notion of 'structural coupling', i.e. the constant reciprocal interaction, between an individual and environment. From this point of view, culture is regarded as a dynamic process relying on both historically and traditionally strengthened patterns and constant innovation and adaptation. These three approaches are chosen as a basis for the current analysis of KS multimodal reference marking due to several reasons. First, the analysis in the following chapters suggests that the availability of shared cultural knowledge influences both spatial and person reference in KS. Second, the interaction of gestures and speech also involves the intertwining of semiotic types (see Chapters 8 and 9) and sociocultural conventions guide the interpretation of individual reference forms in both modalities (see Chapter 10). As such, some gestural and vocal reference forms can be regarded as shared symbols in the KS reference system. Third, the overall hypothesis that reference is a dynamically created process which involves an interaction between vocal, gestural, and environmental[36] aspects is on a par with the notion of culture from the

[34] See also Goodenough (1981)
[35] See e.g. Keesing (1974), Foley (1997) and Duranti (1997) for an overview.
[36] As the following chapters demonstrate, this environment consists of the linguistic and extralinguistic context of communicative interactions (Chapters 8 and 9) as well as of the sociocultural and sociohistorical context of the Seychelles (Chapter 10).

point of view of Practice Theory. As such, the analysis in Part II of this study combines the different notions of cultures to draw a holistic picture of KS multimodal reference marking

The integration of language in those three accounts consequently varies from language as a carrier of cultural values, language as a resource or condition of culture, or communicative practice as an outcome of historical structural coupling. The concern of communication and its interaction with culture is the subject of study in Anthropological Linguistics. In the words of Foley (1997: 3), anthropological linguistics is

> that subfield of linguistics which is concerned with the place of language in its wider social and cultural context, its role in forging and sustaining cultural practices and social structures [investigating] how humans make meanings together in social interaction through conventional transgenerational cultural and linguistic practices.

Duranti (1997: 2) takes a slightly different point of view in defining Linguistic Anthropology as "the study of a language as a cultural resource and speaking as a cultural practice", regarding language as "a powerful tool rather than a mirror of social realities established elsewhere". Even though the two definitions differ in the angle from which language and culture are approached, both definitions are clearly positioned against the structuralist viewpoint of a categorical differentiation between language and culture[37]. Instead of declaring a dichotomy, language and culture are regarded here as a unitary system. This is also supported by some representatives of the ideational approaches, such as Goodenough (1964:37), who calls the division of language from culture "an unfortunate half-truth", even though his approach to culture is based to some extent on the structuralist tradition.

This chapter briefly outlines the three approaches to culture, i.e. Cognitive Anthropology, Symbolic Anthropology and Practice Theory, describing their key features as well as the role language plays in them (Section 4.2). Section 4.3 then introduces the notion of an 'ecology of communication' and the integration of speech, gesture and culture in this framework. It is shown that meaning is created not only by the interaction of speech and gesture, but that communicative patterns are embedded in the sociocultural and sociohistorical environment of a community.

[37] The structuralist approaches to language in the 1950s and 1960s established a clear dichotomy between grammar on the one hand and language use on the other hand, with their studies focussing mostly on the grammatical part.

4.2 NOTIONS OF CULTURE

Ideational approaches to culture have their roots in the structuralist movements in the first half of the 20th century and can be subdivided into approaches to culture as a cognitive and culture as a symbolic system. What the two approaches have in common is their understanding of culture as networks of concepts or ideas and thus their tendency to focus on structures in the individual's mind rather than on the interaction with the environment. The third approach described below is Practice Theory, which produces a more dynamic notion of culture. Here, culture is regarded as a product of structural coupling, i.e. the reciprocal shaping of individual and environment, which over time may lead to the routinisation of interactive patterns over time.

4.2.1 Cognitive Anthropology

In Cognitive Anthropology culture is regarded as a system of knowledge. According to Goodenough (1964: 36), for example,

> […] culture is not a material phenomenon; it does not consist of things, people, behavior, or emotions. It is rather an organization of these things. It is the forms of things that people have in mind, their models of perceiving, relating, and otherwise interpreting them.

In other words, defining culture requires not only the definition of phenomena, cultural objects, and traditions, but more importantly their mental representation and patterns of organisation (Goodenough 1981). Furthermore, sharing a culture is regarded as sharing criteria, or predictions, for the categorisation of these aspects as well as criteria for the attribution of meaning (Goodenough 1981; Wallace 1961). Inspired by the work of Boas, Sapir and Whorf, this approach to language and culture started off with a rather relativistic reading in the new discipline of anthropology. However, in the 1970s with e.g. Berlin and Kay's work on colour terms, a universalist and innatist understanding of cognitive anthropology was often preferred. Over 20 years later relativistic approaches re-emerged with the seminal work of Lucy (1992) and studies investigating spatial cognition across cultures. Regardless of a relativistic or universalist approach, the underlying concept prevailed that members of a culture share "patterns of thought, ways of understanding and making inferences and predictions" (Duranti 1997: 27).

Even though Foley (1997) judges the traditional approaches of Cognitive Anthropology to under-theorise environmental aspects, they are not completely neglected in more recent accounts. Some lines of research within Cognitive Anthropology have for example extended the system of cultural knowledge to include not only other members of the community, but also to activities,

artefacts and the environment, thus defining culture as a socially distributed system of knowledge (Lave 1988; Lave and Wenger 1991; Salomon 1993a; Hutchins 2001). In this framework, thinking is not regarded as an isolated process taking place in individuals' heads. Rather, it is seen as a cooperatively joint process involving other individuals and "culturally provided tools and implements" (Salomon 1993b: xii f.), including activities and techniques of using tools. As a consequence, even though there may be shared patterns of conceptualisation or activity, a community is also characterised by a certain variety of knowledge states (Duranti 1997). Thus, the distribution of knowledge across members of a community is characterised by its diversity, including shared, partially overlapping and also rather individual knowledge states. Similarly to Practice Theory, in the Distributed Cognition approach culture can thus be defined as an outcome of historical processes, in which knowledge is stabilised by "[t]he crystallization of partial solutions to frequently encountered problems" (Hutchins 2001: 2071).

The role of language in Cognitive Anthropology is very explicitly stated in most accounts. Early approaches, such as componential analysis, focused on linguistic expressions and their feature-based analysis, resulting e.g. in the analysis of folk taxonomies of kinship terms within the structuralist framework (Keesing 1974; Duranti 1997). As a consequence, language and culture are not seen as two distinct systems, but rather as a part-whole relationship (Goodenough 1964: 37). Similarly, in more recent accounts, the analysis of linguistic expressions and grammatical relations are regarded as a window not only to cognitive processes but also to culture-specific tendencies of structuring and categorising knowledge (e.g. Levinson and Wilkins 2006; Enfield and Stievers 2007). Furthermore, in the framework of distributed knowledge, language assumes two roles: on the one hand, it is key to coordinating behaviours and transferring knowledge. On the other hand, language itself is a product of historically accumulated patterns, with both explicatures and implicatures being part of shared knowledge.

The approach to culture as a knowledge system is directly reflected in the following analysis of KS multimodal reference. It is shown that not only linguistic patterns but also shared knowledge, both on an individual and a societal level, are expressed in KS spatial and person reference.

4.2.2 Symbolic Anthropology

While in Cognitive Anthropology, culture is regarded as a system of knowledge, in Symbolic Anthropology it is a system of signs as a representation of the world that makes up culture (Duranti 1997). Similar to Cognitive Anthropology, Symbolic Anthropology has its roots in the structuralist school of thought and may be regarded as a reconstruction of the former (Levinson 2009). One of the most important early accounts of Symbolic Anthropology comes from Lévi-Strauss, who regarded "cultures as shared symbolic systems that are cumulative creations of mind" (Keesing 1974: 78). These

symbolic systems further express culture-specific tendencies of categorisation and knowledge organisation, which illustrates the close ties to Cognitive Anthropology. In those early accounts, Lévi-Strauss acted on the structuralist assumption of binary features, meaning that the underlying cognitive tendencies were described as structuring the world according to binary oppositions (Duranti 1997).

Later accounts from the 1970s onwards emphasised the interactive aspects underlying these sign systems (Geertz 1973) as well as the application of semiotics to other cultural processes (Silverstein 1976, 2003). Geertz' (1973) interpretive approach regards cultural meaning as a shared system, i.e. publicly distributed codes of meaning (Keesing 1974). His approach draws on 'thick description' as a key element of ethnographic research, defining it as

> a stratified hierarchy of meaningful structures in terms of which [cultural artefacts, activities, etc.] are produced, perceived and interpreted, and without which they would not […] in fact exist, no matter what anyone did or didn't do […] (Geertz 1973: 7)

This thick description, then, is supposed to uncover the cultural "webs of significance" (Geertz 1973: 5). Silverstein takes another step in describing this system of public codes according to Peircean and Jakobsonian semiotics. For him, social behaviour is meaningful and thus also communicative, which is why it fulfils the function of a sign vehicle (Silverstein 1976). Communication is thus approached on the level of semiotics, where linguistic or behavioural signs stand for a certain meaning (Duranti 1997). As such, he identifies two functions of signs, both on a linguistic and a cultural level: the pragmatic function on the one hand, which includes the referential function of a sign as well, and the purposive function of socially constituted behaviour on the other hand (Silverstein 1976: 44). As such, the use of a certain communicative form, i.e. a certain sign vehicle, is one way of pointing to not only referents, but also to implicated cultural aspects such as attitudes or beliefs (Duranti 1997). In a further approach, Halliday (1984: 8) proposed to overcome the dichotomy of linguistic structure versus language use, by postulating that "the social context of the linguistic code is the culture" and that "the social context of language behaviour […] is also a semiotic construct". He describes the semiotic network of information systems, where semiotic properties of a linguistic system are also present in the socio-cultural system. This, in turn, also means that language is only one of many ways to realise cultural meanings (Ibid.: 9).

In sum, Symbolic Anthropology regards culture as a network of linguistic and cultural signs that are shared by the members of a community. In the current study of KS multimodal reference, this view is reflected on different levels. First, the semantic reference forms of KS can be viewed as linguistic signs that express reference according to linguistic convention. Similarly, it is shown that several gesture families can be assumed to relate to person and spatial reference. Second, as was established in chapter 3, gestural function can be described semiotically, i.e. gestures can be deictic, iconic or symbolic. Especially the latter group, which is commonly referred to as emblems, can express similar

characteristics as a linguistic sign. Third, as proposed by Halliday (1984), the creation of meaning is not restricted to the utterance of words or the performance of gestures, but is inextricably connected to the sociocultural system of a given community. As such, meaning is a matter of cultural networks of signs, which can also occur in other sociocultural domains and interactive behaviour.

4.2.3 Practice Theory

Practice Theory emerged in the late 1970 and integrates behavioural and ideational accounts of culture within a dynamic framework of interaction. A key notion is the 'habitus', which is a set of "durable, transposable dispositions" (Bourdieu 1977: 72) being "constituted in practices and […] always oriented towards practical functions" (Bourdieu 1990: 5)[38]. This set of dispositions functions as a guideline for both cognition and behaviour and involves implicit, tacit knowledge rather than explicit, articulate knowledge (Foley 1997). The habitus is transmitted cross-generationally and, after successful acquisition, constitutes "embodied history, internalized as a second nature" (Bourdieu 1990: 56) enabling an individual to successfully act as a member of a given society.

The approach to culture as practice is based on a reciprocal, dynamic interaction between individual and environment, referred to as 'structural coupling' (Maturana and Varela 1987). Erickson (2004: 4) describes structural coupling as a "continuing process of mutual checking and mid-course correction [which] makes interaction social". The result of structural coupling, especially considering it over a certain period of time, may lead to reorganisation of both the individual and the environment. If applied to the social system, structural coupling may also occur with other individuals, triggered by communicative behaviour (Foley 1997: 11 f.). If seen from a historical perspective, culture may then be defined as routinised patterns of social structural coupling that have been stable over generations (Ibid.). This is also where the connection to Bourdieu's habitus can be drawn: it is the sum of structures (behavioural, communicative, cognitive) that have been preserved over time through consistent social structuring. Practice Theory not only describes the dynamic interaction between individual and environment, but also emphasises the aspect of embodied practice. As Foley (1997: 12) puts it, "all knowledge is action in a given context, more specifically, embodied action", with stressing the interdependence of knowledge and action.

The role of language in practice theory is twofold: On the one hand, language can be seen as "a kind of social institution", i.e. a cultural tool used in instances of structural coupling (Erickson 2004: 14). On the other hand, language is subject to structural coupling as well, as is shown by discourse and conversation analysis. Furthermore, from a diachronic point of view, the idea of a habitus can be

[38] As Streeck (2013: 678) remarks, the term 'habitus' was first introduced by Mauss (1973 [1935]), whose considerations treated the habitus not only on societal but also on an individual level.

transferred to communicative practice: the communicative or linguistic habitus consists of routinised, or sedimented, patterns of communication established by a speech community over time (Michael 2011; Erickson 2004). At the same time, these grammaticalised patterns of a communicative habitus constantly undergo change due to structural coupling with other speakers, social contexts and also individual goals (Michael 2011).

Furthermore, Practice Theory does not only concern speech, but is directly connected with bodily practice, i.e. gesture use. Due to the physical action expressed in this modality, the link of gestures to communicative practice in the form of structural coupling is very explicit. Gestures are not only referential, but also inherently interactive, and are structuring and structured by a close interaction with the environment. Furthermore, gestures can be seen as embodied activity which is guided and structured by a community's communicative, or gestural, habitus, i.e. shared and sedimented patterns (Streeck 2009, 2013). As such, gestures are indeed 'environmentally coupled' (Goodwin 2007).

4.3 Ecology of Communication

The different notions of culture and the role of communication within those frameworks mentioned above differ in assuming either cognition, symbols or behavioural patterns as their starting point. Nevertheless, as becomes evident especially in the later accounts of Cognitive and Symbolic Anthropology, all of them assume a certain interaction, hence communication, between an individual and its environment. The environment itself consists of other individuals, i.e. community members, societal features such as hierarchies, traditions or customs, and contextual features of the communicative event. From a linguistic point of view the question arises as to what extent these extralinguistic features interact with speech and gesture.

Approaches in Linguistic Anthropology attempting to integrate communication into such a larger framework make use of ethnographic methods. Hymes (1974: 4) for example emphasises that instead of studying linguistic forms in isolation, "one must take as context a community, or network of persons, investigating its communicative activities as a whole", integrating "facets of the cultural values and beliefs, social institutions and forms, roles and personalities, history and ecology of a community" into the analysis. According to Hymes, the focus must be put on the integration of language and these factors, as opposed to the traditional separation between 'purely' linguistic aspects and environmental or contextual factors. This "culturally contextualised description of language" (Michael 2011: 126) can take place on both a community level and the level of speech acts. As Michael (2011) notes, however, this approach suffers from two drawbacks: the lack of a generalised theoretical

foundation and the sheer vastness of the task itself. Nevertheless, embedding linguistic practices into a larger socio-cultural frame, even if only a few of such factors can be taken into account, enriches the analysis and constitutes one further step towards a better understanding of such practices[39]. The metaphor of ecology and its transfer from biology to communicative practices has also been suggested by Haugen (2001). He defines language ecology as "the study of interactions between any given language and its environment" (Ibid.: 57), including not only the physical but also the social environment. The study of a language in the light of its ecology thus involves several factors, such as its classification in relation to other languages, linguistic demography, domains of use, varieties and co-existence with other languages, attitudes, standardisation and language policies (Ibid.:65).

While languages have been studied with ethnographic methods for some time now, there are also some cross-cultural comparisons of gestures that have integrated environmental factors to some extent (e.g.; Haviland 1993, Kendon 2004a, 2004b; Wilkins 2003). Furthermore, Kendon (2004b: 326 ff.) gives historical evidence for gesture being not only a cultural practice but being influenced by social factors as well. As a consequence of his elaborate comparisons of gestures in Naples and Northamptonshire he proposes to integrate the so-called 'micro-ecology of communication' into an analysis in order to collect further evidence on sociocultural factors influencing gesture use. His definition of micro-ecology is based on Hymes' (1974: 4) 'communicative economy', i.e

> the boundaries of the community within which communication is possible; the boundaries of the situations within which communication occurs; the means and purposes and patterns of selection, their structure and hierarchy […]

Kendon's (2004b: 350 f.) micro-ecology of communication[40] further includes

> […] how the different modalities of communication are employed, how they are related to one another and how they "trade off", one in relation to the other, according to the circumstances of communication.

Similarly, Streeck (2009; 2013) suggests that an adequate account of multimodal communication must take into account both general aspects of gesture production and the sociocultural background of a

[39] As Michael (2011) notes, ethnographic methods and the integration of socio-cultural and other environmental aspects of language use have become an important tool in not only studying but also saving endangered languages.

[40] See also Goffman (1964: 133ff.), who stated that "The individual gestures with the immediate environment, not only with his body, and so we must introduce this environment in some systematic way […] while the substratum of a gesture derives from the maker's body, the form of the gesture can be intimately determined by the microecological orbit in which the speaker finds himself."

given community. As such, insights into a communication system can best be gained by investigating situated interaction.

According to Kendon (2004b: 354), there are four criteria that have to be taken into account for the integration of the micro-ecology of communication in an analysis and that will be illustrated below: (1) the affordance of a modality towards interlocutors; (2) the circumstances of use; (3) the ecological circumstances of daily interaction; and (4) sociocultural norms and regulations of use.

Kendon's application of this approach to the gesture system of Naples illustrates the interaction of the four criteria and gesture use (Ibid.: 351 ff.). Concerning criterion (1), he notes that the Neapolitan style of gesturing promotes visibility and attention by communication partners and bystanders. Furthermore, this style of 'theatrical' gesturing, as he describes it, not only concerns public but also private interactions (criterion 2). As for criterion 3, the ecological circumstances associated with traditional Neapolitan life are a lack of (personal) space, a predominant amount of everyday life taking place outside, and the consequential high level of background noise. Finally, the sociocultural norms that have to be taken into account in this micro-ecology include the high presence of kinship networks within a neighbourhood, the mixing of domestic and occupational life as well as the competition for attention in such an environment and the need for asserting an individual identity within such a collective (criterion 4).

In addition to Kendon's (2004b) four criteria, Streeck (2009: 8ff.) lists six 'gesture ecologies' in which gestures interact with the environment. While Kendon's approach concerned the societal level of a communicative ecology, Streeck focuses on the micro-ecology of a given communicative situation. First, gestures can be used to "make[…] sense of the world at hand" (Ibid.), such as handling objects. Second, they can direct the interlocutors' attention to visually perceptible entities or phenomena which are out of reach but still present to the immediate environment of a communicative interaction. Third, gestures can express information about referents beyond the immediate surroundings, which can for example be depicted. This focus on the representation of objects can also take place on a more abstract level. The fourth mode of gesture ecology concerns 'ceiving' or 'ception' (Ibid.: 9), i.e. the abstract and often metaphorical articulation of concepts by gesture. Fifth, gestures can be used as communicative action themselves, as the description of referential gestures in chapter 3.5 has shown. Finally, gestures can directly be oriented at the interaction between interlocutors, for example by touching an addressee.

The framework of embedding speech and gesture within a communicative ecology is applied to the current study of spatial and person reference in Kreol Seselwa. Reference is considered as a multimodal act, in which gesture is regarded as "one of many factors shaping the construction of meaning in situ" (Williams 2013: 241). As such, gestures, and not only speech, is considered to be part of a community's culture. As Streeck (2013: 678) puts it, "Human hands are enculturated hands. But

the practice of gesturing also enculturates them." Thus, multimodal communication is approached as a dynamic cultural process[41], including the activation and interpretation of shared knowledge. In the light of the practice theoretical approaches mentioned above, multimodal reference is further treated as an interactive process, whose patterns are not only influenced by a history of structural coupling, but which underlies the dynamics of reciprocal negotiation in the communicative situation itself. Following Hanks (1990), the analysis begins with a description of the forms of speech and gesture available in Kreol Seselwa. In a next step, pragmatic aspects including information structure, the ordering of preferences, as well as contextual factors of the communicative situation are taken into account for both speech and gesture. Finally, the analysis is embedded into a larger socio-cultural framework, taking into account the micro-ecology of communication. Here, aspects such as shared cultural knowledge, as well as societal, cultural and historical aspects are linked to the vocal and gestural practices of Kreol Seselwa.[42]

4.4 SUMMARY

Culture can be broadly defined as learned behaviour which is key to group membership and is transmitted cross-generationally. While in Cognitive Anthropology, culture is regarded as shared knowledge, Symbolic Anthropology regards culture as a system of symbols. In Practice Theory, culture is seen as a result of repeated structural coupling, in which the individual and the environment influence each other.

Language has been shown to play an important role in all of the three approaches. Generally, it is assumed to be a part, or subsystem of culture. From the point of view of Cultural Anthropology, language is used as a window to cognitive processes, as well as an important means of coordinating behaviours and transferring knowledge to other members of the community. In Symbolic Anthropology, both language and cultural traditions are seen as interconnected signs, sharing the same semiotic properties. Finally, in Practice Theory, language assumes two roles: first, it can be seen as a tool for structural coupling, and, second, it is shaped by structural coupling as well and can thus be regarded as a communicative habitus. It is important to note that in all three approaches to culture, not only vocal communication but also gestures can be integrated.

The notion of an ecology of communication can be used to describe the interaction of communication and environment in a given community. Based on Hymes' (1974) notion of a

[41] See also Streeck's (1993) notion that "culture is a verb".

[42] I would like to emphasise at this point that no strong relativistic view is intended in this study. Rather, the findings presented in the following chapters suggest that socio-cultural aspects should be taken into account as some of many possible influencing factors.

communicative economy, this framework has been extended by Kendon (2004a, 2004b) to include not only speech, but also gestures. Combining linguistic and ethnographic methodology, communicative patterns of a given community can thus be described on several levels: the form of speech and gesture, the use of multimodal communication in relation to the immediate environment, and the interaction of multimodal communication and factors of the general socio-cultural environment beyond the communicative situation. Furthermore, Streeck's (2009) account of an ecology of gesture complements Kendon's societal approach by listing six ecologies in which gestures can be used in a given communicative interaction.

5 CREOLE LANGUAGES AND SOCIETIES

5.1 INTRODUCTION

Creole languages differ from other languages in many linguistic and extralinguistic aspects (Bakker et al. 2011). They tend to be young languages that are the result of an intense language contact situation, often associated with both linguistic and social violence in the course of colonisation and slavery (Muysken and Smith 1994). On a linguistic level, their ancestry cannot always be traced back over centuries to some kind of proto-form or language family, since they constitute a mix of the languages involved in the language contact situation and of idiosyncratic features. Furthermore, many Creoles are assumed to have emerged quite abruptly, in opposition to other languages which have developed rather gradually over a much longer period of time (Bickerton 1988).

Since KS has emerged under such distinct circumstances, it is important to incorporate not only the sociohistorical and sociocultural background but also characteristics of Creole structure in the analysis. Thus, this chapter first introduces important key notions and theoretical assumptions within the field of Creolistics (Section 5.2). Section 5.3 summarises several aspects of the structural features of Creole languages, focussing on those that are relevant to the further analysis of the KS reference system. Furthermore, considerations about the demographics and social structure of Creole societies are presented and the long-lasting effects of colonialisms on post-colonial societies is described in Sections 5.4 and 5.5. Finally, these general assumptions are applied to the case of KS, with a short historical overview provided in Section 5.6 and an overview of the current linguistic situation on the Seychelles in Section 5.7.

5.2 KEY NOTIONS IN CREOLISTICS

5.2.1 Pidgins and Creole languages

An important distinction must be drawn between ‘Pidgins’ and ‘Creole languages’. Pidgins, which are sometimes regarded as the precursors of Creole languages, arise at the very beginning of a language contact situation in which the groups involved do not share a common language (Samarin 1968). As a consequence, Pidgins are characterised by telegraphic speech, very little or even no grammar, and a restriction of domains of use. Pidgins have not only been associated with extreme workforce, but also with contact situations such as trade or nautical settings. Most importantly, there are no native

speakers of Pidgins (Bakker 1994). Some Creole languages emerge if a Pidgin is used over a longer period of time and serves as the native language of the following generations, as it is the case with Tok Pisin in Papua New Guinea or Nigerian Pidgin (Velupillai 2015). Together with a disrupted cross-generational transmission of the original languages involved in the language contact situation, the Pidgin thus serves as the only linguistic input available for the following generations' language acquisition. In opposition to Pidgins, where we find a tendency towards a restriction of domains as well as towards an instability of structural patterns, Creoles are used more consistently, are applied across domains and do have native speakers. Due to the different social and demographic settings of individual circumstances of contact, three different types of Creole 'life cycles' can be defined (Mühlhäusler 1980, 1986), which are illustrated in Figure 5.1.

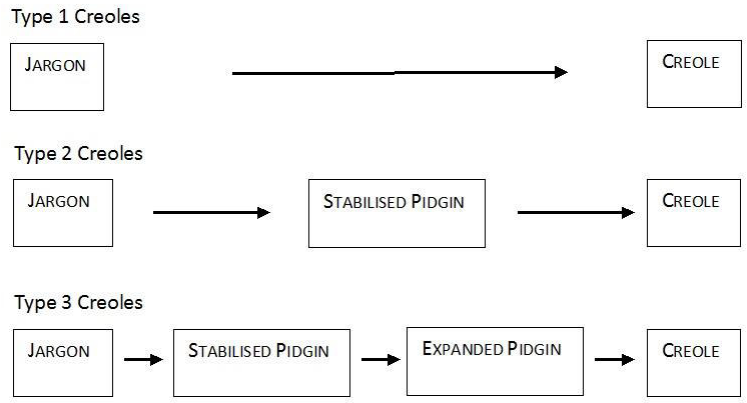


Figure 5.1: Three types of Creoles (based on Mühlhäusler (1980; 1986)).

As Muysken and Smith (1994) further describe, type 1 Creoles, also called 'radical' Creoles, emerge directly from a jargon or Pidgin, without any intermediate form of communication. The most popular example of such a radical Creole is Hawaiian Creole English. The development of type 2 Creoles, in contrast, is characterised by an intermediate step in which a stabilised pidgin is used before the Creole is formed. An example for a type 2 Creole would be Torres Strait Creole English. Finally, type 3 Creoles develop out of a jargon or Pidgin, with the two intermediate steps of a stabilised and an expanded Pidgin, such as it has been the case in Tok Pisin.

Since the emergence of Pidgins and Creole languages is also associated with social violence, the languages involved in the formation process have a different status in prestige, reflecting the power relations between the colonisers and the colonised. The colonisers' language is usually more dominant and can be referred to as 'superstrate' language. The colonised language, or 'substrate'

language, on the other hand, is low in prestige and its use is often supressed[43]. The Creole language emerging from this extreme situation constitutes a mix of features from both the superstrate and the substrate language, with the superstrate language being mostly represented in the lexicon. Furthermore, not all of these features can easily be traced back to the individual super- or substrate languages. In addition to their mixed nature, Creole languages have also often been shown to display a certain degree of variation. In some Creoles, such as Guyanese Creole, a three-way distinction can be drawn between a 'basilect', i.e. the most 'creole' variety, an 'acrolect', which is very close to the superstrate language, and a 'mesolect', which constitutes an intermediate form (Bickerton 1973, 1975; Rickford 1987). For other Creoles, such as Morisyen, a distinction between urban and rural varieties seems to be more appropriate (Adone 1994).

5.2.2 Theoretical approaches to Creole genesis

In the discipline of Creolistics, there has been much debate concerning the exact processes of creole genesis. In general, four approaches can be differentiated: theories focusing on superstrate input, theories focusing on substrate input, gradualist or developmental theories and universalist theories[44]. Theories focusing on superstrate input emerged rather early in the development of Creolistics as a discipline. One line of theoretical reasoning suggested a monogenetic origin of all Pidgins and Creoles in West African Pidgin Portuguese (e.g. Thompson 1961). This approach, however, has been deemed to be "fundamentally flawed in any case" and "completely irrational" by den Besten, Musken and Smith (1994: 88). Another approach focused on the role of European dialects or nautical varieties that were spoken by the colonisers by the time of Creole formation (e.g. Chaudenson 1992, 2001). However, while there are certainly elements of these dialects present in some Creoles, their presence cannot explain all features of Creole languages (den Besten, Muysken and Smith 1994). A more popular approach suggests that imperfect second language learning of the superstrate language by the colonised population is the main driving force in Creole formation (e.g. Seuren and Wekker 1986). Indeed, there are some similarities between such interlanguages and structures that can be found in Creoles, such as the lack of inflected verb forms, a fixed word order and the reduction or lack of a determiner system (den Besten, Muysken and Smith 1994: 98). However, there are other features commonly found in Creole languages that cannot be attributed to imperfect second language

[43] Of course, there are many cases that involve more than two languages in contact. In Surinam, for example, several European languages constituted superstrate languages. Furthermore, in most cases the slave population did not form a homogeneous community so that the co-presence of many substrate languages was very common (Arends 1994).

[44] The following overview is based on the individual contributions in Arends, Muysken and Smith (1994).

acquisition (Ibid.). Finally, the notion of foreigner talk has been connected to Creole genesis (Naro 1978). The general idea here is that the colonising group used a simplified version of their language to communicate with the colonised population and that this served as an input for the Creole languages to emerge[45].

Approaches focusing on the role of substrate input in Creole genesis attempt to identify features of those languages in Creole languages. One example is Lefebvre's (1986) work on Haitian, which she analyses as a relexified version of the substrate language of the Gbe cluster, a group of languages of the Niger-Congo language family. Other studies, such as Daeleman (1972) have shown substratal features in the lexicon of Atlantic Creoles. However, Arends, Kouwenberg and Smith (1994) draw attention to two profound problems of substrate theories. On an empirical level, with only few example cases, it is almost impossible to find evidence of the substrate languages actually present in the context of slavery as well as information about the numbers of speakers. On a methodological level, many of such studies are accused of arbitrarily picking out features of a Creole language and searching for their presence in any of the West African languages. However, an argument brought up by Bickerton (1981) is that, due to the high linguistic diversity in this geographic area, "it is simply a matter of chance that sooner or later some apparent correspondences will be found" (Arends, Kouwenberg and Smith 1994: 100). In many cases, a further factor which makes it difficult to identify links between substrate and Creole features is the lack of detailed historical records documenting the exact geographical and linguistic background of the slaves deported to the colonies.

Universalist approaches regard Creole languages to be a reflection of linguistic universals. The overall idea is that there are similarities between Creole languages which cannot be explained by substrate and superstrate theories alone. Rather, they must be due to some universals, both on a procedural and a constitutive level (Muysken and Veenstra 1994: 121 ff.). The semantic transparency theory Seuren and Wekker (1986) for example focuses on the reflection of semantic universals by Creole languages, since in those languages semantic structures have been found to reflect a more or less direct one-to-one relation between semantic elements and words, promoted e.g. by the lack of an elaborate inflectional system. The probably best known and most vividly debated[46] universalist approach is Bickerton's language bioprogram hypothesis (Bickerton 1984), which connects the genesis of Creole languages to processes of first language acquisition. The underlying assumption is that

[45] Another factor that may contribute to a certain scepticism against the last two approaches as an overall explanation for Creole genesis is the traditional tendency (especially by colonising societies and their later generations) to regard Creoles as 'broken' versions of their superstrate languages. At this point I would like to stress that even though (imperfect) second language acquisition certainly has played a certain role in their formation to some extent, Creole language constitute fully-fledged languages of their own, which is visible on all linguistic levels.

[46] As Muysken and Veenstra (1994: 129) put it, "this proposal has not met with universal acceptance among creolists".

Creoles emerge in only one generation with the driving force of an innate linguistic capacity of children. Since the children grow up with the imperfect input of Pidgins only, an innate bioprogram is assumed to have stepped in, providing them with a "skeletal model of language" (Bickerton 1984: 173). The similarities between Creole languages are thus explained by means of biologically endowed linguistic universals.

Finally, there are developmental approaches, describing creolisation as a gradual process rather than a more or less punctual event. In contrast to the universalist accounts mentioned above, more than one generation is assumed to be involved in the creation of a Creole (e.g. Arends 1992). Evidence for this can be found in type 3 Creoles, which undergo a certain phase of expansion and stabilisation of a Pidgin (Arends and Bruyn 1994). However, Arends and Bruyn (1994) also refer to Bickerton's (1991) note that these gradual changes may also be regarded as regular processes of language change, which are not connected to the emergence of Creole languages in the first place.

5.3 Structural Features

Even though it is still subject of an ongoing debate amongst linguists whether Creole languages form a distinct typological class or not[47], both on linguistic and on sociolinguistic terms, certain similarities can be found. Muysken and Smith (1994: 8 f.) list four general assumptions in this regard: Creoles are alike, simple[48], mixed[49], and show more internal variation than other languages. Further similarities can be found concerning the lexical and structural features of Creole languages.

One striking feature Creole languages share is that their lexicon usually derives from the superstrate language to a large extent (Muysken and Veenstra 1994). Of course, traces of substrate languages can be found in the lexicon as well, but to a considerably lesser degree. Typical domains where traces of substrate languages can be found are what Arends, Kouwenberg and Smith (1994) call 'cultural' domains, i.e. vocabulary of flora and fauna, traditions and beliefs, cuisine and actions

[47] See e.g. Bakker et al. (2011) for a discussion in favour of, and DeGraff (2003) and Mufwene (2000) arguing against the notion of Creole exceptionalism.

[48] Similar to the notions of 'hybridity' and 'Creole' (see Section 5.5), the idea that Creole languages are 'simple' is related to a tradition of colonial line of thought which considers a 'proper' language to be pure and complex. However, the current study uses these terms with a neutral connotation. As such, the 'simplicity' of Creole languages noted by Muysken and Smith (1994) refers to the fact that Creole languages tend to be analytic languages that do not convey grammatical aspects in bound morphemes. As Bakker (2015) notes, this is also the case for 15% of the languages of the world. This in turn does not imply that such languages are less complex, but that they make use of other strategies to convey grammatical relations.

[49] In this context, 'mixed' refers to the fact that traces of both substrate and superstrate languages can be found in Creole languages. Furthermore, while the vocabulary often is predominantly derived from superstrate languages, Creole languages nevertheless display a distinct, idiosyncratic grammatical structure. Thus, Creole languages must not be confused with 'mixed languages', such as Michif or Guridnji Kriol. I would like to refer the interested reader to the edited volume on the mixed language debate by Matras and Bakker (2003)

associated with the provision of food. Furthermore, not only vocabulary but also cultural concepts can be traced back to substrate influence. Hollington (2015), for example, provides linguistic evidence for African conceptualisations of the body, events, and kinship relations in Jamaican. In other words, even though many words can be traced back to superstrate influence, and in some cases also substrate influence, their semantic and structural features may differ. Muysken and Veenstra (1994) note that this is often the case in function words.

On a structural level, some features have been claimed to be "fairly general across creoles" (Muysken and Veenstra 1994: 124). Creole languages have been found to display very little or even no instances of affixation, which is why they can be categorised as analytic languages, such as Mandarin Chinese. The lack of inflectional affixes, however, does not mean that there are no grammatical markers. Grammatical categories such as tense, mood or aspect are expressed by a group of unbound markers which usually occur in front of the verb (Maurer and the APiCS Consortium 2013b). Another common feature found in many Creoles is the fixed SVO word order (Huber and the APiCS Consortium 2013; Maurer and the APiCS Consortium 2013b).

With regard to noun phrases, which play an important role in establishing reference, several tendencies have been documented for Creole languages. Taking into account that the majority of nouns of a Creole lexicon come from the superstrate, it becomes apparent that several structures of the noun phrase have been lost or reanalysed in the Creole system (Baptista 2007b: e.g.; Baptista and Guéron 2007; Bollée 2004; Bruyn 1994). Most European languages that have been involved in the formation of Creoles have a determiner system marking (in)definiteness, number, and often also gender. Compared to these systems, many Creole languages display a different determiner system. In the case of many French-based Creoles the gender distinction between *le* and *la* is not found in the article system anymore (Déprez 2007). Furthermore, indefinite plural markers, corresponding to French *des* seem to have been lost (Ibid.). In fact, bare nouns, i.e. noun phrases without a determiner, seem to be much more common in Creole languages than in the languages involved in their emergence (Baptista and Guéron 2007). In addition to the notion of definite versus indefinite reference, two other distinctions have been proposed to account for many Creole article systems: 'individuated' versus 'non-individuated' (Mufwene 1986) and 'specific' versus 'non-specific' (Bickerton 1984). Examples (5.1) – (5.3) illustrate the difference between these three notions:

(5.1) Definite versus indefinite reference

a) I bought a car this morning.
b) I bought the car this morning.

(Lyons 1999: 3)

(5.2) Individuated versus non-individuated reference

a) How many cakes did he eat?
b) How much cake did he eat?

(Bruyn 1994: 262)

(5.3) Specific versus non-specific reference

a) Tom plans to bring up three children on his own – they're horrible brats and I wish him luck.
b) Tom plans to bring up three children on his own – but first he needs to find a woman to bear them for him.

(Lyons 1999: 170)

(5.1) illustrates the difference between 'definite' and 'indefinite' reference. Definiteness, as illustrated by (5.1a), is characterised by an awareness about the familiarity, identifiability, uniqueness and inclusiveness of a referent to both the speaker and the hearer (Lyons 1999). Indefiniteness, in contrast, requires only the speaker to be aware of the identity of a referent and in some cases also includes reference to an arbitrary member of the NP-class (Ibid.), and is illustrated by (5.1b). The notion of individuation can apply to both definite and indefinite NPs. Mufwene (1986) distinguishes between individuated nouns, i.e. singular and plural count nouns in count use (5.2a), and non-individuated nouns, i.e. mass nouns and count nouns in non-count use (5.2b). The notion of 'specificity' is illustrated by (5.3), where in (a) the referent is specific and familiar to the speaker and has an extensional reading (Lyons 1999). (5.3b), however, involves an arbitrary member of the NP class *the children* instead of a familiar referent. Such cases, together with the use of generics, have thus a non-specific and intensional reading (Ibid.). In the determiner system of many Creoles a direct association between (in)definiteness and individual articles is not always possible. Thus, it has been suggested that in Creoles, the occurrence of determiners is associated with the notions of individuation (Mufwene 1986) and specificity (Bickerton 1984; Baptista 2007a; Guillemin 2011) instead.

A further development in the article system of Creoles is that demonstratives are often grammaticalised to function as a definite article (Bruyn 1994; Déprez 2007). The singular-plural distinction is usually overtly marked both in the article system and on the noun itself in the superstrate languages. In Creoles however, plural morphology on the noun is very rare and in those cases in which

it occurs it is often associated with 'acrolectal' instead of 'basilectal' varieties (Bruyn 1994; Mufwene 1986). Instead, Creole languages often tend to have reanalysed and grammaticalised numerals, adjectives such as 'many' or noun phrases such as 'a bunch of' to form independent plural markers, which may be in prenominal (e.g. Kreol Seselwa) or postnominal (e.g. Belizean Creole)[50] position. Moreover, in many Creoles, overt plural marking is not always strictly required but rather optional (Velupillai 2015). Whether or not overt plural marking is necessary often depends on contextual aspects. In some Creoles overt plural marking seems to be connected to definiteness while in others this seems to depend rather on the notions of individuation and specificity (Mufwene 1986; Baptista 2007b; Bruyn 1994). Furthermore, inferences from the context or previous discourse themselves may replace overt plural marking as well (Bruyn 1994).

Similar to the occurrence of bare noun phrases, many Creole languages also differ from their superstrate languages in terms of information structure. Drawing on Li and Thompson's (1976) notion of topic prominence as a typological feature, Escure (1988; 1997) describes a striking difference between English-based Creoles, which seem to have a rather topic prominent character, as opposed to their superstrate English, which displays a non-topic prominent character. For example, Belizean Creole seems to make frequent use of a deictic expression to mark topics (Escure 1997). However, as Veenstra and den Besten (1994) note, there does not seem to be any uniformity concerning the choice of strategies of topic or focus marking in Creole languages, which leaves the contrast to their superstrate languages (and in a majority of cases also to their substrate languages) to be the only consistent aspect in this respect. Indeed, amongst the different strategies of emphasis or foregrounding we find repetitions, cleft constructions with or without presentational markers, topic or focus markers, and several fronting operations such as topicalisation and focalisation (Veenstra and den Besten 1994; Escure 1997, 1988; Byrne and Winford 1993; Maurer and the APiCS Consortium 2013a).

These structural aspects of Creole languages are also present in KS to some extent. As is described in detail in Chapter 7, KS also displays a reduced determiner system, which results in the occurrence of bare nouns. Furthermore, KS speakers apply several strategies to emphasise or foreground referents, some of which are not found in its lexifier language French.

[50] The postnominal variant is only one of several plural marking strategies in Belizean Creole (Escure 1984).

5.4 Sociohistorical Aspects of Creole Formation

Due to their origin in contact situations, Creole languages show many similarities on a sociolinguistic and sociohistorical level. They can be grouped together according to the circumstances of their emergence, i.e. we find maroon Creoles (e.g. Saramaccan), plantation Creoles (e.g. Jamaican Creole), fort Creoles (e.g. Papía Kristang) and mission Creoles (e.g. Ngukurr Kriol) (Bickerton 1988; Arends 1994; Adone 2003). Even though most Creoles share the sociohistorical feature of having emerged in the course of the European colonisation starting in the 16th century, the individual circumstances of Creole speaking societies may differ. For example, while in some cases an indigenous population was already present when colonisation began, other cases involved the deportation of slaves to previously uninhabited land. Similarly, in some of these societies, the colonised population still had some access to their native language, even though the power relations within the colony assigned more prestige to the superstrate language and also more pressure to learn it, while others were completely disrupted from their mother tongue. As a consequence, Chaudenson (1977) suggests a grouping of Creole languages according to their contact to substrate languages: those Creoles whose speakers still had access to their native language are grouped together as 'endogeneous' Creoles, whereas those whose genesis took place in the circumstances of a forced disruption of L1 access are referred to as 'exogeneous' Creoles. In the former case it must be made clear, however, that very often speaking the substrate language was still highly supressed by the colonisers and associated with very low prestige. Thus, even though access to the substrate language was technically possible, social factors may have prevented the language from being used on a regular basis. Furthermore, in all circumstances of emergence, people with very different linguistic backgrounds were forced to live and work together under the power of the colonisers. As colonisation usually went hand in hand with great violence, the colonised population was under high pressure to find a way of communicating not only with the colonisers but also amongst themselves as quickly as possible.

What most colonised societies shared was their social structure, which can be described as 'multi-stratal' (Arends 1994). Especially in larger plantations slaves were divided to assume different functions, which in turn was associated with different degrees of access to the superstrate languages. Field slaves, for example, usually had the least contact to the superstrate languages, while for house slaves contact with the colonising population was rather frequent. Two functional positions in the hierarchy have been mentioned as special cases especially concerning linguistic transmission and Creole formation. The language spoken by the so-called 'creole mama', a slave responsible for taking care of the children, is assumed to have served as important input in the following generations' first language acquisition (Arends 1994). Furthermore, due to his relatively high status in the hierarchy of slaves, the black overseer constituted a link between white masters and the black population, and thus

was key to translating the orders given in the superstrate languages into a communicative form the other slaves could understand (Ibid.). Unfortunately, however, no speech samples have been found documenting the nature of this input. Due to the power relations and social violence associated with colonialism, the degree of access to superstrate languages can be seen as an important aspect of Creole genesis.

Depending not only on the position of a colonised individual within the strata described above, but also on the stage of colonising activities and the demographics of both colonising and colonised population, the degree of access to the superstrate language differed largely. Baker (1982) refers to 'events', or several stages, in the demographic development during colonisation. While event 0 refers to the beginning of colonisation, event 1 is the point in time when both the colonised and the colonising population were of equal number. In the period of time between event 0 and event 1 contact to the superstrate language was provided to most of the slave population, since the slaves and masters usually lived closely together in homestead communities (Arends 1994). Chaudenson (2001) refers to this as 'société d'habitation'. After event 1, however, the number of slaves is considered to have increased dramatically and the small homestead communities were extended to larger plantations. At the same time, the colonising population did not increase at the same rate, which is why direct contact to L1 speakers of the superstrate language was only possible for a small subsection of the slave population. Furthermore, many of these 'sociétés de plantation' (Chaudenson 2001), not only consisted of 'salt water slaves', i.e. slaves that had been born in Africa and had been deported to the new colony, but also of 'creoles'[51], who grew up in the colony. These two groups obviously differed in their linguistic background: while the former acquired a substrate language as L1, the latter grew up in a more mixed linguistic environment. Depending on the individual society, the substrate languages may not have been spoken at all, or only by a few people, and access to L1 speakers of the superstrate language may have been rather rare (Bickerton 1984; Arends 1994). Finally, at event 2, the number of 'creoles', i.e. slaves born in the colony, equalled the number of the colonisers. Due to these circumstances, i.e. the numerical parity of locally born slaves and masters and the resulting lack of contact to the superstrate language, event 2 can be regarded as the point in time when a Creole language emerges (Bickerton 1984).

[51] The term 'Creole' has been used differently across disciplines and has undergone further changes in its denotation. While in the context of the sociohistorical and demographic developments, 'creole' is used to refer to those slaves that had been born in the colonies, in other circumstances it has been used to refer to individuals of mixed descent. I would like to refer to Hall (2003) and Cohen and Toninato (2010b) for an overview of this matter.

5.5 CREOLE SOCIETIES TODAY

Traces of their emergence under extreme circumstances are still present in Creole speaking communities today. Their mixed ancestry can be found on many levels, such as language, traditional activities, music, literature or cuisine (see e.g. Chaudenson 2001). At this point, it is important to note that similar to the term 'creole', notions of 'hybridity' or 'syncretism' have been used differently across various disciplines, reflecting not only different approaches but also different ideologies. Approaching these terms and their use in (scientific) discourse with a postcolonial reading, Eurocentric notions of mixed as opposed to pure systems prevail quite often. Similarly, earlier accounts of hybridity tended to regard it as a more or less fixed state, in which components of different origin coexisted next to each other (Stewart 1999). However, as has been described in the previous subsections, focussing on a clear superstrate-substrate dichotomy cannot account adequately for the linguistic structure of Creole languages. Unfortunately, colonialist concepts associating hybridity or 'creolité' with imperfect, sometimes even vulgar, states of language and culture, can still be found in some discourses today. Such connotations reduce hybridity, and with it also Creole societies, to an exotic case study at best. As Bhabha (1994) has emphasised, this conceptualisation further substantiates the subalternity assigned to postcolonial societies[52]. According to Bhabha's reasoning, this stance may also be due to hybridity being "a condition marked by conflict as well as a process of cultural negotiation and resistance to colonial authority" (Cohen and Toninato 2010a: 244).

A more adequate view, which will also be the basis of this thesis, focuses on 'creolité' as both the process and the product of the creation of a so-called third space, which is

> […] marked by the fusion of cultural elements drawn from all originating cultures, but resulting in a configuration in which these elements, though never equal, can no longer be disaggregated or restored to their originary forms, since they […] have been permanently 'translated'.
>
> (Hall 2003: 29)

Thus, even though there are instances where e.g. superstrate or substrate influences can be found, the majority of Creole culture, including language, is marked by fusion rather than juxtaposition of influences. To a certain extent, this fusion of linguistic and cultural elements coming from different sources can be related to what Bakhtin (1981: 358ff.) refers to as 'organic' or 'unintentional' hybridisation, which he assumes to be an underlying principle true for all languages[53]. He describes this type of hybridisation as 'mute', especially when contrasted with 'intentional' hybridisation, i.e. the

[52] See also Mabardi (2000) for more details.

[53] "We may even suggest that language and languages change historically primarily by means of hybridization, by means of a mixing of various 'languages' co-existing within the boundaries of a single dialect, a single group of different branches or different groups of such branches […]" (Bakhtin 1981: 359f.)

juxtaposition of different voices within an utterance. However, at the same time, Bakhtin (1981:360) asserts that

> while it is true [that] the mixture of linguistic world views in organic hybrids remains mute and opaque, such unconscious hybrids have been at the same time profoundly productive historically: they are pregnant with potential for new world views, with new "internal forms" for perceiving the world in words.

Since hybridity is approached as a dynamic process rather than a single state, transformative processes of negotiation and conceptualisation can be considered to be an ongoing pattern. As such, 'Creoleness' is seen as

> […] a potential new basis from which a popular creativity, which is distinctive, original to the area itself, and better adapted to capture the realities of daily life in the postcolony, can be, and is being, produced. (Hall 2003: 32)

Similarly, Baker (1995: 6) criticises that the underlying assumption of the different accounts of Creole genesis mentioned above is that "how Creole languages were formed is failure". He suggests that instead they should be treated as "successful solutions to problems of human intercommunication" (Ibid.) in extreme situations of contact.

Unfortunately, this way of reasoning does not seem to be fully established the everyday life in many postcolonial societies. The (post)colonial trauma (D. Adone, p.c.) is still visible in many domains. For example, the low prestige of Creole languages is still persistent in many communities, even though the language may serve as an L1 for the majority of the population. This can be linked to the fact that during a long period of suppression, even after slavery had officially been abolished, generations had grown up with the repeated enforcement of the message that their language was inferior (P. Choppy, p.c.), leading to a lack of value persisting until today. This attitude is often reinforced by the fact that many Creole languages still coexist with their superstrate languages, which are usually still associated with a lot more prestige[54]. It is thus not rare to find attitudes reducing Creole languages to being vernaculars which are excluded from any official domains of language use. Similarly, echoing the negative connotation of ambivalence and hybridity in colonial discourse, in many cases self-confidence about an own identity does not seem to be well established. This of course is also connected to a certain dominance of the former colonists in many domains of everyday life. Thus, dominant Western identities still prevail in the surroundings both geographically and culturally, constituting a powerful

[54] Many Creole languages also coexist with prestigious languages other than their superstrate. In e.g. Mauritius, the Seychelles, or Louisiana, the French-based Creole languages coexist with English, which in turn is highly prestigious not only due to a subsequent colonisation by the British after the French, but also due to the general status of English worldwide today.

competition to Creole identities. Nevertheless, there are also many cases which illustrate a new confidence and the formation of a distinctly Creole identity. As we will see in the below, the Seychelles, for example, have been pioneers in declaring their Creole language as one of three national languages. Moreover, both on the Seychelles and also in other Creole societies we find a growing body of literature not only using their Creole language as a medium of writing, but also providing narrations emancipated from the traditional colonial point of view.

5.6 The Seychelles: A Historical Overview

The Seychelles[55] archipelago consists of 116 islands located in the western part of the Indian Ocean (see Figure 5.2). The Inner Islands include 44 islands, which are mainly of granitic nature. This group of islands also contains the main island Mahé with the capital Victoria, as well as Praslin and La Digue, which are the second largest islands. The majority of the total population of approximately 90 000 live on Mahé, with the rest being distributed to Praslin (7%) and La Digue (3%) (National Bureau of Statistics Seychelles 2013). The 72 coralline Outer Islands are sparsely populated and are mostly uninhabited (Ibid.).

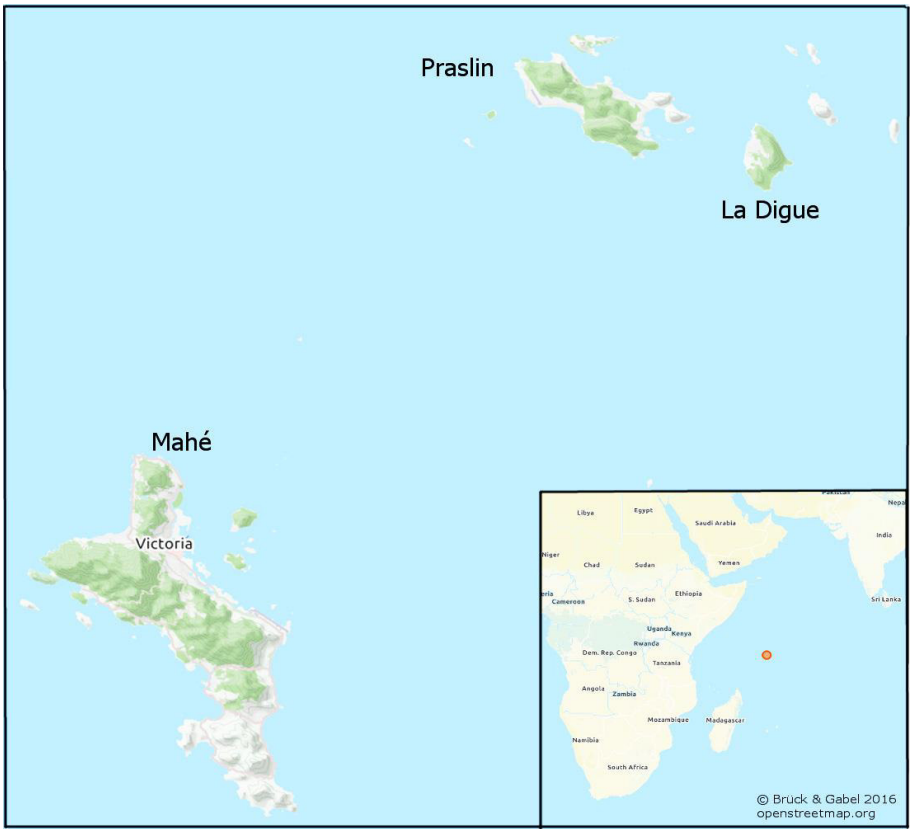


Figure 5.2: The three main islands of the Seychelles and their location in the Indian Ocean.

[55] See the official website of the Seychelles government (http://www.egov.sc) for further information.

First reports of the Seychelles are traced back to Vasco de Gama at the beginning of the 16th century. During the following centuries, the individual islands served as ports of call for several Portuguese and Arab trading ships (Holm 1989; Allen 2001). Similar to the other islands in the Indian Ocean, the Seychelles were uninhabited until 1770 when first settlement occurred in the course of French colonisation. Having started on Reunion in 1665, French plantations were established on Mauritius in the early 18th century and later also on the Seychelles. In addition, the Seychelles also served as a transit point for slave trade involving Madagascar as well as Indian, Arabic and African territories. In opposition to Reunion, which was characterised by a long period of a predominant societé d'habitation (Chaudenson 2001), settlement on Mauritius was mainly characterised by a societé de plantation right from the start (Corne 1982; Baker and Corne 1986). Furthermore, during the colonisation of Mauritius and the Seychelles, the organisation of slave trade was much further developed, thus involving the deportation of a far more heterogeneous population to these islands. While the first slaves deported to the Seychelles were 'creoles', i.e. descendants of a mixed population consisting of slaves with African, Indian or Malagasy origins, the rise of commercial slave trade resulted in a large number of new slaves being imported from East Africa (Bollée 1993). In 1814, with the Treaty of Paris, both Mauritius and the Seychelles were taken over by the British. Even though slave trade was officially outlawed by the British in 1807[56], illegal slave trade flourished in the Indian Ocean, leading to a rapid increase of the slave population on the Seychelles, which reached its peak in 1817 (Papen 1978; Allen 2001; Michaelis and Rosalie 2013a).

Furthermore, after not only slave trade but also slavery itself had been abolished in 1835, the Seychelles faced another increase of African population coming from Arab slave ships whose captives were transported and released to the Seychelles by the British Navy (Holm 1989). After some time as a dependency of Mauritius, the Seychelles became a Crown Colony in 1903. On a demographic level, this resulted in the increase of Indian labourers on the islands. In 1976, the Seychelles became an independent republic led by James Mancham. Following a 'coup d'état' in the first years of the young republic, France Albert René became president of the Seychelles, ruling with a one-party socialist system until 1991 when a multiparty system was announced. From 2004 onwards the country was led by James Michel. After his resignation from office in 2016, then Vice President Danny Faure was sworn in to complete the presidential term of office. Due to their past under the British rule, the Seychelles are a member of the British Commonwealth of Nations.

The Creoles spoken on Reunion, Mauritius, the Seychelles and Rodrigues are commonly subsumed under the term Indian Ocean Creoles (IOCs). However, due to a lack of historical sources, the exact circumstances of their emergence is still disputed. Chaudenson (1974; 2001) suggests that,

[56] However, slavery itself was not abolished until 1835.

following the patterns of settlement in the Indian Ocean, the Creole developed in Reunion first and then was imported together with the slaves to Mauritius and the other islands in the course of colonisation. He further attributes the differences found between Reunion Creole (RC) and Mauritian Creole (MC) today to different sociolinguistic circumstances on these islands after the establishment of the Creole language. For example, starting in the mid of the 18th century, the society on Reunion was, and in fact is still today, characterised by the presence of a white proletariat with close ties to the French language (Chaudenson 2001). As a consequence, a Creole continuum can be found on Reunion, with a mesolectal 'creolised French' being associated with this social class (Ibid., Papen 1978).

In opposition to Chaudenson, Baker and Corne (1982b) hold the view that RC exhibits profound differences to the other IOCs[57], which they term 'Isle de France Creoles' (IdeFC), on a structural level and thus cannot be assumed as their direct precursor. In accordance with Hull (1979), they propose that IdeFCs have their origin in a Creole that was newly formed with the settlement on Mauritius and then spread to the other islands from there. While they do acknowledge a certain influence from RC, accounting for similarities such as lexical items from Malagasy and grammatical items from Bantu, they regard it as one of many contributors rather than assigning it a predominant role in the emergence of IdeFCs (Baker and Corne 1982a). Furthermore, IdeFCs seem to exhibit more creole-like features, which can also be found in Atlantic Creoles with a French superstrate, than RC, such as predicate fronting, passive constructions and double predication (Corne 1982). On a sociohistorical level, Corne (1982) argues that the linguistic situation on Mauritius was highly heterogeneous during its formative years, including not only RC speakers, but also slaves from both West and East Africa, Madagascar and India. As a consequence, no linguistic continuity existed and a Creole emerged out of necessity, serving as a vehicular language on Mauritius (Ibid.). In the course of the settlement of the Seychelles from 1770 onwards, this stabilised form of MC was exported to these islands together with the slaves (Michaelis and Rosalie 2013b). However, since in the early time of the settlement on the Seychelles there was also a certain amount of immigration from Reunion present, RC and KS are assumed to have a "privileged link" (Corne 1982: 114). As a consequence, KS is not only mutually intelligible with MC, but also shows some similarities to RC (Bollée 1993; Baker and Corne 1982a). Taking the demographics of the individual islands into account, the IdeFC speaking colonies were characterised by a high number of slaves far surpassing the number of white masters from the start, which, as has been described in section 5.4, is an important precondition for creole formation. Since however, the settlement of Reunion included a longer period of a 'societé d'habitation', as described above, there was close contact of slaves and masters during the formative years of RC. According to Corne (1982: 118), this is the reason why "[t]he verbal system of RC, although not devoid of creole features, behaves […] even

[57]See also Holm (1989), who refers to RC as a 'semi-creole'.

in its basilectal forms as a manner clearly reminiscent of French". He assigns the creole features existing in RC to a later development, when the number of slaves increased in a second stage of the settlement on Reunion and the already established vernacular was further creolised.

5.7 THE SEYCHELLES: CURRENT LINGUISTIC SITUATION

Nowadays, 99% of the population speaks KS as their mother language and only a low percentage speaks English or French as a first language (Fleischmann 2008). While KS is often associated with informal situations, official circumstances often involve English. Even though French is also represented in newspapers and on television to some extent, it is far less often used than English and is mainly associated with the Catholic church, where services are often still held both in French and KS. All three languages are represented in the media. In the newspapers, English seems to be the predominant language, with KS being used in some articles only. On television and on the radio, however, KS plays a more central role, which Bollée (2004) leads back to the oral tradition of KS since its beginnings.

The relatively high representation of KS in the media is one of several results of the language policy of the Seychelles. While in the negotiations shortly before the independence, English was elected as an official language[58], a 'bilinguisme équilibré' was announced during the First Republic[59], meaning that English was designated as the official language of all governmental domains and French was allowed to be used in specific contexts (Hoareau 2010). After the coup d'état, i.e. in the times of the Second Republic, KS was elevated from an oral medium of the common people to one of three official languages, alongside with English and French (Ibid.). Thus, the Seychelles were pioneers in acknowledging their Creole as an official language[60]. In a further step, KS was declared the first national language, with English as the second and French as the third national language, in 1981 (Bollée 1993). In the course of the Third Republic, after the multiparty-system was introduced in 1991, the three languages were again pronounced as national languages of equal status (Hoareau 2010).

This language policy, promoting the recognition of KS from the very start of independence, had strong effects on language use not only in the media but also in education. While in earlier times students were often punished for speaking their Creole language in school (Z.-K. Mahoune, p.c.), the new language policy led to its use as the medium of instruction in the first four years of education, i.e. from Crèche to Primary 2 (Bollée 1993; Hoareau 2010; Minister Ledikasyon 2004, 2014), being the first nation worldwide to do so. From Primary 3 onwards, KS is also taught as a subject and most subjects

[58] However, a member of the assembly was also allowed to use French or KS (Hoareau 2010).
[59] The First Republic refers to the time between independence and the coup d'état in 1977.
[60] Another pioneer in this regard was Haiti, where Haitian Creole gained official status in 1961 and was declared a national language in 1987.

are taught in English, with some, such as political education or creative arts, still taking place in KS (Ibid.). French is usually taught as a subject from year 4 onwards (Bollée 1993). However, as Fleischmann (2008) notes, there seems to have been a steady decline of KS use in education. Similar to the oppositions uttered at the beginning of this language policy, denying any need of KS being taught in schools (Bollée 1993), Fleischman (2008) refers to Obondo's (1997) description of the common view in many African countries that instead of bilingual education a stronger focus should be placed on the promotion of English in order for students to acquire it more easily.

Another outcome of the language policy of the Seychelles was the formation of the 'Komite Kreol' in 1979. This committee, consisting of representatives of both government, media and the culture sector, took the responsibilities of protecting KS, guiding its use and supporting its enrichment by the creolisation and the creation of new words (Bollée 1993) and is still active today. One important product of the committee's effort was the development of a new orthographic system on the basis of Bollée and D'Offay's work (Bollée 1977; Bollée and D'Offay 1978) together with the Ministry of Education (Bollée 1993). Furthermore, a KS-French dictionary was published in 1982, applying this new orthography (Ibid.). In addition to the Komite Kreol, an institute was founded in 1988 to further promote linguistic and cultural development on the Seychelles. The 'Lenstiti Kreol' aims to promote not only research on KS, but also to develop both linguistic and literary resources for the general public, especially in the domain of education. The Lenstiti Kreol has always been dedicated to support and promote the development of literature in KS. While there had already been some publications in KS[61], supported by e.g. the Ministry of Education, the great efforts of the Lenstiti Kreol caused an increase of stories, poems and theatre plays written in KS (Bollée 1993). With the Creole Institute of Seychelles Act, 2014, the 'Lenstiti Kreol Enternasyonal' was launched, widening its focus to "the Creole Zone of the Indian Ocean and the Carribean countries", thus "nurturing [the] knowledge about the Creole language and culture in its global context […] with all connections and values that is being shared in the Creole world" (Ministry of Culture and Tourism 2014: 394 ff.). Since 2016, the work of the Lenstiti Kreol has been complemented by the creation of the 'Creole Language and Culture Research Institute' based at University of Seychelles, which is committed "to create an academic forum for the advancement of the Seychellois Creole language, culture and society within the context of and in collaboration with Indian Ocean and other Creole societies in the world"[62].

[61] E.g. Accouche's (1976) *Ti anan en foi en Soungoula;* Bollée and D'Offay's (1978) *Six Contes Creoles,* or *Mon tann en leokri* by Abel (1982), which was the first novel to be published in KS.

[62] http://unisey.ac.sc/research-consultancy/creole-language-and-culture-research-institute [accessed on 2017-07-02].

5.8 SUMMARY

This chapter has illustrated that Creole languages and societies have been formed under extreme circumstances involving both linguistic and social violence. Several theoretical approaches have been proposed to account for the genesis of Creole languages, focussing on superstrate or substrate influence, proposing gradual or punctual development, and arguing for or against universal structures to be found in these languages. Similarly, whether or not Creole languages constitute a distinct typological group has been much debated. Nevertheless, some similarities, such as the tendency for bare nouns, a reduction of the determiner system and a preference for topic-marking structures, can be found in many Creole languages.

Creole languages seem to exhibit more similarities on sociohistorical and sociolinguistic grounds. Creoles have emerged in the light of extreme violence, dislocation of individuals and in the most cases also slavery. These populations consisted of many individuals who rarely spoke each other's languages and were forced to find a common means of communication under extreme pressure. Due to the strongly and multiply stratified organisation of colonial societies, access to the superstrate language was not guaranteed and declined with the demographic changes brought by e.g. an extension of the plantations. As a consequence, more and more generations grew up with a Creole as their native language. Today, many Creole societies still display traces of these traumatic circumstances. The power relations of the colony setting, with the superstrate language being associated with very high, and the Creole language with very low prestige, can still be found today. A colonial approach to the notion of hybridity, associating it with imperfection or at least a certain oddness, has been present in both the public and the scientific discourse until today. Similarly, the presence of ambivalence in Creole societies, which is due to their sociohistorical circumstances, still constitutes a problem in many of those societies. However, hybridity can also be conceptualised as a creative process, with its product being a 'third kind', i.e. a new identity creatively merging many different components of individual origins. There are also many Creole societies that endorse this new identity, valuing their language and creating cultural assets that emancipate them from their colonisers, such as it is the case with Trinidad English Creole, Haitian Creole, or Kreol Seselwa.

The Seychelles were settled in the course of the colonisation of the Indian Ocean by the French, which started in Reunion in the 17th century and was extended to Mauritius and the Seychelles in the course of the 18th century. The majority of the first slaves brought to the Seychelles is assumed to have come from the already existing plantations on Mauritius. In the course of the following decades, however, more and more slaves were deported to the Seychelles from Madagaskar and East Africa. After having become a British colony, slave trade on the Seychelles continued despite the official ban in the early 19th century, leading to an increase of slaves until 1817. Based on historical documents

accounting for the path of colonisation from Reunion to Mauritius, and then only later from Mauritius to the Seychelles, as well as on the demographics on the individual islands, Baker and Corne (1982) argue that KS has its origins in MC rather than in RC.

After having gained independence from the British colonisers in 1976, the Seychelles acknowledged their Creole language by not only declaring it a national language, alongside with English and French, but also establishing it as a medium of instruction in the primary level of education. Furthermore, institutions such as the Komite Kreol and the Lenstiti Kreol Enternasyonal have been founded to further promote the language. Nowadays, KS co-exists with English and, to a lesser degree, French. However, as Fleischmann (2008) has already noted, there seems to be a certain part of the population that still regards English and French as more prestigious than KS.

The linguistic, sociohistorical and cultural patterns and concepts that were described in Chapters 2 to 5 are applied to the study of KS multimodal reference marking in the following part. After describing the methodology in Chapter 6, Chapter 7 describes the vocal and gestural forms that are relevant for reference marking in KS, based on the theoretical aspects of reference, the phonological description of gestures, and the structural features associated with Creole languages. Chapters 8 and 9 then analyse co-speech gesture interaction in spatial and person reference, as well as the mobilisation of multimodal reference in situated conversations. In Chapter 10, I combine the notion of a communicative ecology with the sociocultural and sociohistorical aspects of the Seychelles, demonstrating that the postcolonial characteristics described above are reflected in multimodal reference marking in KS.

Part II: Multimodal Reference in Kreol Seselwa

6 Subjects and Methods

6.1 Data Collection

6.1.1 Methodology

The data for this study on multimodal reference in KS were collected in two subsequent fieldtrips to Mahé in 2014 and 2015. Figure 6.1 shows the different field sites on Mahé where the majority of interviews took place.

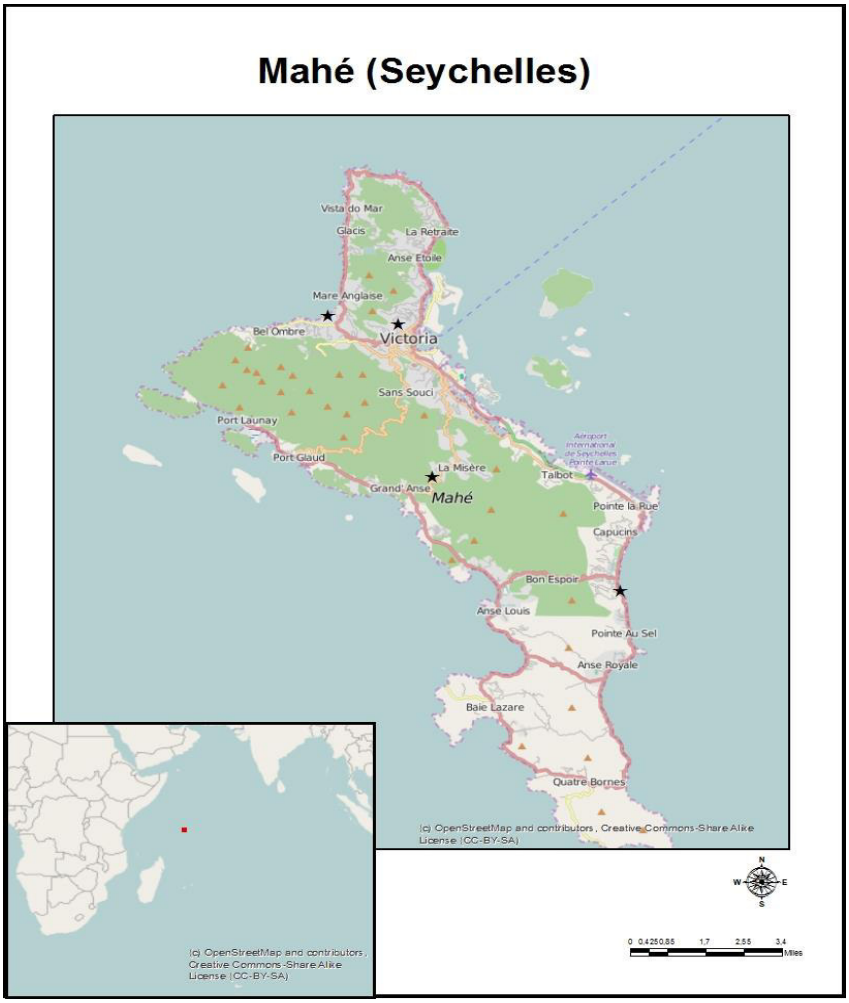


Figure 6.1: Field sites on Mahé visited in 2014 and 2015.

The fieldtrips were approved by the Ministry of Tourism and Culture of the Seychelles and supported by the Lenstiti Kreol Enternasyonal. Before each session the participants were asked to fill out and sign an informed consent form (see Appendix I), in which they were able to determine the type of data recording, as well as to authorise different degrees of publication of their data. Furthermore, they were informed that they could stop the interviews at any moment and were also given the possibility to retract from the consent anytime. Both video recordings and audio recordings were carried during each session if the participants agreed to it. If possible, video recordings were taken by two recording devices, documenting the sessions from two different angles in order to facilitate the subsequent analysis of gestures. Since it was of prime importance that the participants were feeling comfortable, in some sessions only audio recordings were made. These sessions focused on the socio-cultural background of the Seychelles as well as on comprehension tasks and the extension of a database of semantic reference forms.

In order to gain insights into the KS reference system beyond the linguistic forms used, a triangulation of methods was chosen. If possible, each session started with a short sociolinguistic interview (see Appendix II). For eliciting spatial reference, the *Man and Tree Space Game* (Levinson et al. 1992) was chosen[63]. This game consisted of a set of cards displaying spatial arrays including several objects and figures. One participant was asked to take a look at one card at a time and then, after a rotation of 180° describe it to the other participant, who had to find the corresponding card in her deck. In a practice round each participant had to describe and to identify one card. This practice round was not included in the analysis. After the practice round, the participants were asked to describe six cards each. In another elicitation task, participants were asked to point to certain locations on Mahé and provide route descriptions. For testing the interaction between person reference and metaphorical pointing, short videos were shown to the participants, in which ambiguous sentences were accompanied by metaphorical pointing gestures (see Appendix III). The set consisted of 16 videos in which three participants, two native speakers and the interviewer provided ambiguous reference in sentences such as in example (6.1). In eight of these videos, co-speech gestures were provided. Four of these included metaphorical pointing gestures such as in example (6.2), i.e. with the gestures disambiguating the second sentence by referring to the person initially mentioned. Another four included gestures such as in example (6.3), i.e. disambiguating the person mentioned second. G_{Person} refers to a specific locus designated to that person, while the underlining signals a co-speech gesture produced simultaneously to the utterance of a word.

[63] Further information on the Man and Tree Space Game can be found on the field manual homepage of the Max Planck Institute for Psycholinguistics (http://fieldmanuals.mpi.nl/volumes/1992/man-tree-space-games)

(6.1) Ambiguous sentence applied in the comprehension task.

Anne ek Lisa pe zwe deor. Apre i sitan fatige ki'n al dormi.
Anne and Lisa are playing outside. Afterwards, she is so tired that she goes to sleep.

(6.2) Ambiguous sentences with gestures indicating the first person to be the protagonist.

Anne ek Lisa pe zwe deor. Apre i sitan fatige ki'n al dormi.
G_{Anne} G_{Lisa} G_{Anne}

(6.3) Ambiguous sentences with gestures indicating the second person to be the protagonist.

Anne ek Lisa pe zwe deor. Apre i sitan fatige ki'n al dormi.
G_{Anne} G_{Lisa} G_{Lisa}

Another set of four videos was produced without any disambiguating gestures and four additional non-ambiguous distraction videos were added. All sentences were produced in Kreol Seselwa by two native speakers and the interviewer, with three different handshapes of pointing gestures involved in the co-speech gesture conditions.

In a third elicitation task, participants were asked to point to specific locations on the Seychelles and to describe one of two selected routes on Mahé. In those sessions where no video recording was conducted, gestures produced in the pointing task were noted down with regards to their phonological features and the directions of the vectors projected. This data was later analysed with the help of a map and was consulted as additional confirmation of the patterns that could be found in the video recordings of this task involving other participants.

In order to record reference to persons and locations in a more natural setting, each session was conducted with at least two participants, who were encouraged to interact with each other rather than with the interviewer. Semi-elicited data was provided by locally-anchored narrations (Levinson, Kita and Enfield 2001; Kita 2001), in which the participants were asked to discuss several topics connected to both person and spatial reference. For example, participants were asked to speak about their experiences with the tsunami in 2004 or about a flood which had taken place in 2013. Further narrations concerned the state of moral values on the Seychelles, a topic which was subject to public discussion on the Seychelles during that time, the role of family and neighbourhood, especially in comparison to earlier times, personal associations with individual islands of the Seychelles, and personal and public traditions concerning festivities such as Christmas, New Year's Eve, or Marriage.

However, even though these topics were suggested by the interviewer, the discussions were not structured otherwise, and deviation from the discussion topic were welcomed. This originated in further spontaneous conversations about e.g. the Kreol Festival, which takes place on the Seychelles annually, or a prolonged description of both geographic features and personal associations with specific locations on the Seychelles. In addition to the video and audio recordings, a metadata sheet was designed on which information about the individual session was noted (see Appendix IV). Not only the date, location and session number were noted, but also the orientation of the participants.

In addition to the linguistic methods mentioned above, another focus was put on individual evaluations, local knowledge and meta-knowledge of the participants, since "Postcolonialism […] starts from the premise that those in the west, both within and outside the academy, should take such other knowledges, other perspectives, as seriously as those of the west" (Young 2003: 20). Thus, some participants were asked to discuss individual semantic fields associated with person or spatial reference (see Appendix V). Furthermore, several interviews concerning cultural features of person and spatial reference, as well as cultural aspects of everyday life on the Seychelles were conducted (see Ibid.). In total, approximately 20 hours of video material was collected for those socio-cultural interviews. Finally, observations of spontaneous gestural use in everyday interaction, which could not be recorded, were noted down in order to complement the recorded sessions.

6.1.2 Subjects

In total, 46 participants took part in the study. The majority of participants were female, with the exception of four, two of which only agreed to a very brief session. Starting with the age of 20, several age groups were represented (Table 6.1).

Table 6.1: Distribution of age groups.

Age Group	**Number of Participants**
20-30	12
31-40	5
41-50	11
50+	18

Depending on the permissions of data recording provided by the participants and on the time they had to spare, not each method was applied to each session. Table 6.2 lists the individual methods and the number or participants who fulfilled these tasks.

Table 6.2: Distribution of participants across the individual methods of data collection.

Task	Participants
Elicitation tasks	
Pointing task	26
Route description	12
Space Game	15
Metaphorical pointing videos	25
Locally-anchored narrations and spontaneous discussions	
Family & Neighbourhood	22
Moral Values	8
Flood & Tsunami	7
Marriage	9
Festivities (Christmas, New Year, Festival Kreol)	13
Locations on the Seychelles	6
Interviews	
Sociolinguistic Questionnaire	40
Seselwa Language and Culture	9
Spatial Reference on Seychelles (including semantic fields)	9
Person Reference on Seychelles (including semantic fields)	10

6.2 Data Annotation and Analysis

A qualitative approach to data analysis was chosen in order to provide a holistic account of KS multimodal reference marking. The data provided by the elicitation tasks consists of approximately five hours of video material and was analysed in spread sheets according to qualitative features and quantitative distribution. Table 6.3 below shows the values analysed for each task.

Table 6.3: Values analysed for the individual elicitation tasks.

Elicitation Task	Values
Pointing task	gesture form, veracity of pointing, semiotic types of gestures
Route descriptions	gesture form, veracity of pointing, semiotic types of gestures, information conveyed in speech
Space game	gesture form, veracity of pointing, information conveyed in speech
Metaphorical pointing videos	choice of referent in relation to gestures provided

Since "[p]ractices must be studied in situ, within the moment-by-moment progression of interactions within which they are enacted" (Streeck 2013: 683), a selection of locally-anchored narrations and spontaneous discussions were annotated in detail using the ELAN annotation tool provided by the Max Planck Institute for Psycholinguistics. The files were chosen according to the quality of recording and selected to represent all age groups. Tables 6.4 and 6.5 list the age groups involved in this selection as well as the length of the video material annotated in detail according to each topic.

Table 6.4: Distribution of age groups in the semi-spontaneous data annotated in detail.

Age Group	**Participants**
20-30	3
31-40	2
41-50	1
50+	4
Total	**10**

Table 6.5: Distribution of discussion topics annotated in detail.

Topic	**Minutes of video material**
Family & Neighbourhood	20
Moral Values	6
Flood & Tsunami	11
Marriage	8
Festivities (Christmas, New Year, Festival Kreol)	20
Locations on the Seychelles	5
Total	**70**

In these videos, both speech and gesture were annotated according to an annotation scheme based on Bressem (2013), displayed in Table 6.6 below. This annotation scheme was chosen in order to account for both descriptive features of gestural form and analytic features of their meaning in interaction with speech (Zwitserlood, Özyürek and Perniss 2008). Each annotated feature corresponds to an individual tier in ELAN. Following this scheme, a total of 2102 references in speech, with 449 spatial and 1549 person references were annotated in detail[64]. The total number of annotated co-speech gestures accompanying these references adds up to 906, with 450 being involved in spatial reference and 307 in person reference. 91 references in speech as well as 149 references in gestures were annotated as 'misc', meaning that that they could not be clearly assigned to either person or spatial references. This was for example the case when spatial and person reference merged to such an extent that a clear assignment of the reference to one of these values was not possible.

[64] See Appendix VI for annotation conventions.

Table 6.6: Annotation scheme for speech and gesture.

Level of Annotation		Annotated Features
Annotation of hand gestures	Units	Gesture Unit Gesture Phases
	Form	Articulator Handshape Orientation Position Movement (Type, Direction, Quality)
Annotation of speech	Units	KS Clauses Free Translation Clauses (English)
	Form	Reference Form Word Class
	Semantics	Target Referent Reference Point Referent Type (Non)Individuation (Non)Specificity Referent Proximity Figure/Ground
	Pragmatics	Referential Givenness Relational Givenness Emphasis Ambiguity
Annotation of gesture in relation to speech	Semantics	Target Referent Reference Point Referent Type Referent Proximity Temporal relation Semantic relation Semiotic relation Figure/Ground

The transcriptions and translations of the conversations were provided by six native speakers. Transcriptions considered not only the words uttered, but also included repetitions, incomplete words and sentences, self-corrections as well as pauses. Words that could not be understood completely were either left out or explicitly marked if their assumed meaning could be derived from the context. The free translations did not consider these details. Yet, they constitute English counterparts which were as accurate as possible. For the annotation of referential features in speech, the referential word or construction was identified first. All further features were then annotated according to the time frame of this referent.

All gestures were annotated according to their gesture unit and their gesture phase. Following Ladewig and Bressem (2013: 1063 f.), a linguistic-semiotic approach to gestures was chosen, stressing “the separation of gestural forms and functions in the analytic process”. Thus, except for

gestures that could be straightforwardly identified as beats, all gestures occurring during or immediately before and after a reference form in speech were independently annotated according to their form features. In a subsequent step, the semantics of the individual gestures were annotated following what Duncan (2013: 1008) refers to as the "McNeill method": instead of assessing gestural meaning only in terms of the accompanying speech input, contextual information such as the previous and subsequent discourse, the speaker's viewpoint and general characteristics of his/her gesture production were taken into account. In order to reduce the temporal load of the annotation process, pragmatic features were only annotated on the level of speech. Since the gestures were annotated according to their temporal relation to speech, an interaction with speech on a pragmatic level could be discerned by taking into account this relation and an ELAN search for the respective time alignment.

7 KS MULTIMODAL REFERENCE ON A FORM LEVEL: SELECTED PHONOLOGICAL, SEMANTIC AND STRUCTURAL ASPECTS

7.1. INTRODUCTION

This chapter provides an overview of the referential features KS speakers use to convey information about locations and individuals. Section 7.2 deals with the KS language system and describes both lexical and grammatical features available for spatial and person reference. On the basis of possible referring expressions introduced in Chapter 2.2, aspects of the KS pronoun, demonstrative, article and number system are described. Furthermore, the lexical items used in KS to refer to individuals and those used to refer to locations are listed.

In a second step (Section 7.3), the phonological features of the gestures KS speakers produce alongside such referential expressions are described, according to the parameters previously presented in Chapter 2.3. Furthermore, it is shown that several phonological parameters of KS referential gestures interact with each other and that this interaction can sometimes be associated with a specific reference type.

7.2. THE KS LANGUAGE SYSTEM[65]

7.2.1 The pronoun system

The pronoun system of KS consists of a set of five personal pronouns and five corresponding independent/object pronouns as well as five possessive pronouns. Furthermore, there is one reciprocal and one reflective pronoun, *kanmarad* and *menm*, respectively. The individual pronouns are listed in Table 7.1, with an illustration of their use being provided by example (7.1).

[65] If not indicated otherwise, all the examples from this section onwards are taken from the data set analysed for this study.

Table 7.1: Pronoun system of KS (based on Choppy (2013)).

Personal Pronouns	**Paradigm**	**Person / Number**
Subject Pronouns	mon	1st person singular
	ou	2nd person singular
	i	3rd person singular
	nou	1st person plural
	zot	2nd/3rd person plural
Independent / Object pronouns	mwan	1st person singular
	ou	2nd person singular
	li	3rd person singular
	nou	1st person plural
	zot	2nd/3rd person plural
Possessive pronouns	mon	1st person singular
	ou	2nd person singular
	son	3rd person singular
	nou	1st person plural
	zot	2nd/3rd person plural
Reciprocal pronoun	kanmarad	1st/2nd/3rd person plural
Reflexive pronoun	menm[66]	all persons and numbers

(7.1)

a) **I** pe aprann Kreol Seselwa. (subject pronoun)
3SG ASP learn Kreol Seselwa.
'**S/he** is learning Kreol Seselwa.'

b) Mon donn **li** en liv. (object pronoun)
1SG give 3SG ART book.
'I give **him** a book.'

[66] Note that *menm* can also mean 'same' as in *Nou reste dan menm neighbourhood* ('we live in the same neighbourhood'), and 'even', as in *Menm dan bann kontan zis sanson nwel* ('even in the neighbourhood [you hear] nothing but Christmas carols').

c) **Mwan**, ler mon ti marye […]. (independent pronoun)
1SG when 1SG TNS marry.
'(As for) **me**, when I married […].'

d) I ti pran **son** liv. (possessive pronoun)
3SG TNS take POSS book.
'He took **his** book.'

e) Nou neighbour nou ti konsernen avek **kanmarad.** (reciprocal)[67]
1PL neighbour 1PL TNS involve with REC.
'We neighbours were involved with **each other**.'

f) Nou ti prepar bann pti keksoz pou nou **menm**. (reflexive)
1PL TNS prepare PL little things for 1PL REC.
'We prepared little things [i.e. food] for **ourselves**.'

Strikingly, the 2nd and 3rd person plural pronouns have been conflated, i.e. *zot* is used in both cases. This is in clear opposition to the French and the English system, where there are distinct pronouns available for these functions, i.e. *vous*, 'you', and *ils*/*elles*, 'they'. Furthermore, subject pronouns, independent/object pronouns and possessive pronouns show differences in only the 1st person singular and the 3rd person singular, while the other items remain in the same form as the subject pronoun. Reciprocity is expressed by the pronoun *kanmarad*, which is not marked for person. Finally, the reflexive pronoun *menm* is used across person and number and is also often combined with an independent pronoun.

[67] This example is a case of code-switching, with KS serving as the matrix language and English as the embedded language.

7.2.2 The demonstrative system

In the demonstrative system, we find demonstrative pronouns, demonstrative determiners as well as demonstrative adverbs (see Table 7.2).

Table 7.2: The demonstrative system of KS (based on Choppy (2013)).

Demonstrative	**Paradigm**	**Translation**
Demonstrative pronouns	sa	this/that
	sanmenm sa	this/that (affirmative emphasis and specification)
	tousala	all of this/these
	setaki	each one
	sa bann	these/those
	lot, lezot	the other, the others
Demonstrative determiners	sa	this/that
	(tou) sa bann	these/those
Demonstrative adverbs	la, isi	here
	laba	there

As the examples in Table 7.2 show, *sa* is the most dominant demonstrative and occurs not only individually as a singular demonstrative, but also in combination with other singular and plural demonstratives (*sanmenm sa*, *sa bann*). The demonstrative pronouns and determiners fulfil the typical functions of demonstratives, i.e. they appear in situational, discourse-deictic, recognitional and anaphoric use (Himmelmann 1996). The examples in (7.2) illustrate the individual uses:

(7.2)

a) **Sa** **bann** fler laba i zoli. (situational)
DEM PL flower DEM PAR beautiful.[68]
'**Those** flowers over there are beautiful.'

[68] Whether *i* is a pronoun or not in sentences such as in 5.2a is a highly debated topic. Different analyses have proposed that in such cases, *i* assumes the function of a tense marker (Bickerton 1989), a dummy TMA marker (Michaelis 2000) or an agreement marker (Bickerton 2003). This debate will be briefly addressed in Chapter 9. In the meantime, any occurrence of *i* which cannot be unambiguously identified as a first person singular pronoun will be glossed as 'particle'.

b) […] e sa lafen **sa** zistwar. (discourse deictic)
And DEM end DEM story.
'[…] and that's the end of **that** story.'

(Bollée 2004: 3)

c) Be konmela ou kapab anvoy **sa** **bann** zanfan zwe kouk? (recognitional)
But now 2SG able send DEM PL child play hide.
'But nowadays, are you able to send the children to play hide and seek?'

d) Tou sa delo sa labou pe antre anndan kot nou […].
All DEM water DEM mud ASP enter in at POSS […].

Tousala pe devid anndan. (anaphoric)
DEM ASP flood inside.
'All the water and the mud is getting inside our house […]. **All of this** is flooding inside.'

The situational use, as illustrated in (7.2a), is the standard deictic situation, in which the demonstrative is used to direct the interlocutor's attention to an entity in the immediate physical surrounding. In the case of discourse deixis, the demonstrative is used to point to a discourse unit previously mentioned (7.2b) or to be uttered in the following segments. Example (7.2c) illustrates the recognitional use of a demonstrative, where its use indicates shared knowledge about the referent on the part of the speaker and the hearer. Finally, demonstratives can also be used anaphorically by referring to the same entity as an antecedent. In (7.2d), the antecedents are *delo* and *labou*. Both of them are subsumed under the anaphoric demonstrative *tousala* in the following sentence.

Furthermore, in KS only the demonstrative adverbs differentiate between proximal and distal (*la*/*isi* and *laba*, respectively) whereas this differentiation is not present in the demonstrative pronouns and demonstrative determiners. The use of these three demonstrative adverbs is illustrated by the examples below.

(7.3)

a) I annan en zoli lafreser **laba** anler. (distal)
PAR have ART nice chilly DEM up.
'The weather is nice and chilly up **there**.'

b) Nou bor kote **isi** nou pa'n tro eksperyanse. (proximal)
1PL next side DEM 1PL NEG-ASP much experience.
'We have not much experienced [the tsunami] **here** on our side [of the island].'

c) Tou pou vini **la**. (proximal)
All TNS come DEM.
'Everybody will come **here**.'

d) Ou'n al Fregate, apre obor Ladig **la**, Ile Coco. (distal)
2SG-ASP go Fregate then next La Digue DEM, Ile Coco.
'We have gone to Fregate, and also **there** near La Digue, to Ile Coco.'

e) Tou zanfan vwazen **la** pou manze. (specific)
All children neighbours DEM TNS eat.
'All the children and neighbours [specific to this situation] will eat.'

f) Savedir mon msye **la**? (specific)
Mean POSS husband DEM.
'You mean my husband?'

g) Mon pe antre se mwan. **La**, sakenn in fini antre se li. (transposed)
1SG ASP enter at POSS. DEM everyone ASP finish enter at POSS.
'I am entering my home. **At this point [in time & in space]**, everyone has already gone inside their homes.'

Laba is straightforwardly used for a distal referent, as (7.3a) illustrates. While Corne (1977) assigns *la* a distal interpretation, the data collected for the study at hand suggest that it is equally often used for proximal reference. One factor influencing the choice between *isi* and *la* could be their difference according to general and specific reference. Several participants suggested that while *isi* is more general, *la* is used for specification and implies a focus on the origo based on the 'I-here-now'. Furthermore, *la* can also be used in a transposition of the origo and additionally express past tense or remoteness, i.e. I-there-then. In this transposed context, however, *la* still expresses a certain specificity in both time and space. Finally, there are also many cases in which *la* expresses distal information as well. However, these distinctive characteristics still display a great variability across speakers. Thus, the only certain difference between *isi* and *la* is that the former is used in the spatial domain only and

expresses proximity, as (7.3b) illustrates. *La*, however, can be used variably across domains, may involve both proximal and distal interpretation and usually expresses an additional notion of specification[69]. Example (7.3c) illustrates the proximal use, where the participant is using *la* to refer to the immediate location of the communicative event. In (7.3d) another participant is speaking about the individual islands she has visited. Since the interview took place on Mahé, the referent marked with *la*, i.e La Digue, is clearly very far away. In (7.3e) and (7.3f), *la* is used to specify the referents. In (7.3e), the speaker described the close bonds among the neighbours in the past and how one would share food amongst each other. This group of guests that are invited to the shared dinner is further specified to consist of both children and (adult) neighbours, the specification being expressed by *la*. In (7.3f) the participant asks the interviewer to clarify, i.e. specify, the question, by asking whether her husband was meant as a referent. Again, *la* is post-positioned to establish this specification. Finally, (7.3g) illustrates a transposed use of *la*. In this example, *la* does not express an origo based in the I-here-now, but a transposed origo based in the I-there-then.

7.2.3 The article system

Similar to the demonstrative system, the article system in KS is reduced if compared to its lexifier language French. As Table 7.3 shows, the singular articles are the demonstrative *sa* (> ça) for definite reference, and *en*[70] (> un) for indefinite reference[71] (Corne 1974; Choppy 2013; Déprez 2007). *Sa* can also be used to indicate definiteness in plural number if it combines with *bann*. If *bann* is used on its own, it can function as both a definite and an indefinite plural article. Furthermore, it is also possible to leave out these articles completely and still convey the notion of a singular definite or singular/plural indefinite. Such bare nouns are very common in cases where contextual information and mutually shared knowledge disambiguate the reference form (Corne 1977; Choppy 2013).

Table 7.3: Articles according to (in)definiteness in KS (based on Corne (1977), Déprez (2007), Choppy (2013) and own data).

	definite	**Indefinite**
singular	sa, Ø	en, Ø
plural	(tou) (sa) bann, Ø	bann, Ø

[69] As is illustrated in the following chapter, *la* is also frequently used to emphasise certain referents, thus assuming its specifying function on both a referential and a discourse level.
[70] The indefinite article *en* must not be confused with *enn*, which is the numeral 'one'. While the former involves nasalisation of the vowel, the latter does not.
[71] According to Déprez (2007), the origin of the indefinite article in French *un/e* is found in another 9 French-lexified Creoles as well.

If one compares the distribution of *sa* in Table 7.2 and Table 7.3, the question arises whether it always functions as a demonstrative or whether it can also assume the function of an article in certain circumstances. Indeed, there is a close connection between demonstratives and definite articles and, according to Himmelmann (1997), the latter often arises out of the former due to grammaticalisation processes. More specifically, the grammaticalisation process proposed by Himmelmann (1997:23) starts with a deictic particle, which is then grammaticalised into a demonstrative pronoun. The next step is the development of a demonstrative pronoun into a demonstrative determiner, and finally, via the intermediate step of a weakly demonstrative definite determiner, into a definite article (Ibid.). If one compares early documents of KS with early accounts of Mauritian Creole, it becomes quite evident that both of them made use of a demonstrative *sa NP la* construction. In MC, a grammaticalisation process has been assumed for the development from *sa NP la* to *la* as a definite article (e.g. Baker 2003; Bollée 2004; Déprez 2007)[72]. In KS, however, this development cannot be attested. As has been described in Section 7.2.2, in KS *la* is used across many contexts and seems to serve as a specifying element rather than a determiner. Furthermore, the fact that in KS *sa* does not appear to be obligatory in all definite contexts and does not exhibit features of semantic definiteness[73] leads Bollée (2004) to the conclusion that it cannot be an article but only a demonstrative. In contrast, Déprez (2007) and Michaelis and Rosalie 2013 argue that *sa* may indeed function as a definite article in certain contexts. Déprez (2007) argues that in KS *sa* may have both a demonstrative and a definite reading. However, she admits that "the uniquely available marker has strong deictic/demonstrative properties […], being more like a demonstrative than a definite determiner" (Ibid.: 279). In accordance with Déprez (2007), Michaelis and Rosalie (2013) also describe *sa* as "far from being grammaticalized and used in every instance of a definite reference"[74]. However, they give an example, taken from Bollée and Rosalie (1994: 224), in which *sa* exhibits semantic definiteness in the form of an associative anaphora:

(7.4)

Ou pa kapab grate pwason..
2SG NEG able grate fish.

Ou a bezwen sal li ek son lekay tou
2SG TNS need salt 3SG and POSS scale all.

[72] However, in a more recent analysis, Guillemin (2011) argues that in MC *la* expresses specificity rather than definiteness.

[73] For a discussion of the characteristics of semantic and pragmatic definiteness, I refer the interested reader to Himmelmann (1997).

[74] http://apics-online.info/valuesets/56-28 [accessed on 2016-06-14]

E ou tir **sa gro zaret** milye, ou tir latet.
And 2SG pull DEM large bone middle, 2SG pull head.

'You cannot scratch the fish. You will have to salt them with their scales. And you pull **the larger bone** in the middle, you pull the heads.'

(Bollée and Rosalie 1994: 224)

As was mentioned in Chapter 5, it has been suggested that the definite-indefinite distinction may not suffice to adequately account for the distribution of articles in Creole languages. As an alternative, the distinction between specific and non-specific reference has been proposed (Bickerton 1984; Baptista 2007). Table 7.4 lists the distribution of determiners according to specific and non-specific contexts in KS.

Table 7.4: Markers of (non)specificity in KS (based on Baptista (2007), Déprez (2007) and own data).

	specific	**non-specific**
singular	sa, en, Ø	Ø, en
plural	(sa) bann, Ø	Ø

As Table 7.4 shows, the picture of determiner distribution is equally complex regarding (non)specificity as it is regarding (in)definiteness. However, several general assumptions can be made. First, the definite marker/demonstrative *sa* is associated with specific use only, as examples (7.5a) and (7.5b) illustrate. Second, the indefinite marker *en* can occur in both specific and non-specific circumstances (7.5c-d), even though in the data collected for this study, the non-specific reading was more common. Third, *bann* occurs in specific contexts only (7.5e), and, fourth, bare nouns lacking any marker can be interpreted as both specific and non-specific in both singular and plural number (7.5f-i)[75].

[75] This observation is based on the data analysed for this study and has been confirmed by several native speakers. However, it is important to note that many of these instances can be assigned to informal and spontaneous speech, which may be in contrast to the description found in Choppy (2013) and other accounts of a standardised version of KS.

(7.5)

a) Mon pa ti a voudre dan soulye **sa bann** dimoun. (specific, plural)
1SG NEG TNS TNS want in shoe DEM PL person.
'I would not want to be in the shoes [i.e. in the place] of **those people**.'

b) Nou osi [al] **sa simityer** la. (specific, singular)
1PL also go DEM cemetery DEM.
'We also go to **the cemetery**.'

c) Prezan, si **en dimoun**, **en zanfan** in grandi. (non-specific, singular)
Now, if ART person ART child ASP grow.
'Now, if a person, a child, grows up.'

d) Li i ti fer **en msye** anvil […] pou ekri let demann. (specific, singular)
3SG 3SG TNS make ART man city TNS write letter ask.
'He made **a man** from the city write the wedding letter.'

e) Tou sa delo pe antre anndan kot nou **bann tenk kabinen bann neighbour**. (specific, plural)
All DEM water ASP enter in at POSS PL tank PL neighbour.
'All the water is entering our house and **the neighbours' tanks**.'

f) En gard ti bezwen anmenn mon[76] **lopital.** (specific, singular)
ART policeman TNS need bring 1SG hospital.
'A policeman had to bring me to the **hospital**.'

g) **Vwazen lontan,** nou pa ti frekant devan laport kanmarad toulazournen.(specific, plural)
Neighbour past 1PL NEG TNS come in front door REC every day.
'**The neighbours** in the past, we did not come to each other's houses every day.'

h) **Voler** a pas kot ou konmela. (non-specific, singular)
Thief TNS come at POSS now.
'**A** thief will come to your house nowadays.'

[76] Even though the first person singular object pronoun has the form *mwan*, it is sometimes interchangeably used with the subject pronoun *mon* in colloquial speech

i) **Marmay** in fer zanfan tro zenn. (non-specific, plural)
Child ASP make child too young.
'**Teenagers** have had children too young.'

In sum, it is only the definite article/demonstrative *sa* which seems to mark specificity, since *en* occurs in both specific and non-specific circumstances. Furthermore, zero-marking seems to occur in all instances, irrespective of number or (non-)specificity. This again shows that in KS, contextual factors play an important role in the interpretation of referents.

Finally, Mufwene (1986) suggested that the occurrence of determiners in Creole languages may be dependent on the notion of individuation (see Chapter 5). Table 7.5 lists the distribution of determiners according to individuated and non-individuated contexts.

Table 7.5: Markers of (non)individuation in KS (based on own data).

	individuated	**non-idividuated**
singular	sa, en, Ø	Ø
plural	(sa) bann, Ø	bann, Ø

Again, it is striking that in KS the bare NP can express both individuation and non-individuation, which is shown in (7.6c), (7.6e), (7.6f) and (7.6h). Furthermore, as illustrated in (7.6a), (7.6b) and (7.6d) the association of overt markers with an individuated interpretation matches that of overt markers with a specific interpretation (see Table 7.4 above). Only in the non-individuated and non-specific interpretations we find a complementary distribution: while non-specificity can also be expressed by *en*, this marker is not associated with non-individuation. Similarly, while the occurrence of *bann* expresses specificity only, it can be used to express both individuation (7.6d) and non-individuation (7.6g).

(7.6)

a) Me akoz i annan **sa bout konble**
But because PAR have DEM piece reclaimed

ki'n fer nou ganny plis afekte. (singular, individuated)
REL-ASP make 1PL get most affect.
'But [it is] because of **that piece of reclaimed land** that we are most affected.'

b) **En gard** ti bezwen amenn mon lopital. (singular, individuated)
ART policeman TNS need bring 1SG hospital.
'**A policeman** had to bring me to the hospital.'

c) Zot vin aranz **semen**. (singular, individuated)
3PL come arrange road.
'They come to fix **the road**.'

d) Dan en zour ou pou arive dan **sa bann landrwa**. (plural, individuated)
In ART day 2SG TNS arrive at DEM PL place.
'One day you will arrive at **those places**.'

e) Mon'n vwar ki manman ki aste ki donn **marmay**. (plural, individuated)
1SG-ASP see REL mother REL buy REL give child.
'I have realised that it was mother who bought [the presents] and gave [them] to **the children**.'

f) **Gato kreol** i pa zis pour lafet kreol. (singular, non-individuated)
Cake creole PAR NEG just for festival creole.
'**Creole cake** is not only for the Creole Festival.'

g) I'n pran antan pour **bann dimoun** pase pour dezenfekte. (plural, non-individuated)
PAR-ASP take time for PL person pass for disinfect.
'It took a long time for people to disinfect etc.'

h) La dimans kreol borlanmer **dimoun** sorti sepa ki bor. (plural, non-individuated)
DEM Sunday creole beach person leave wherever which side.
'On Creole Sunday, **people** come from wherever to the beach.'

As Table 7.5 and the examples in (7.6) illustrate, it is *sa* which seems to be mostly associated with individuation, both in plural and singular. While non-individuation is associated with a bare NP in singular, plural non-individuated entities can be referred to by either a bare NP or *bann*. In sum, the distribution of articles in KS is characterised by great variability. Moreover, in every combination of singular/plural and (in)definiteness, (non)specificity and (non)individuation, a bare NP is possible. A further unifying aspect is that *sa*, both alone and in combination with *bann*, is always associated with definiteness, specificity, and individuation.

7.2.4 Number marking

If one considers the expression of plural and singular in (7.7), it becomes clear that plural marking is also quite variable in KS.

(7.7)

a) **Bann** plant i vin byen.
PL plant PAR come good.
'The plants grow well.'

b) I annan **dimoun** ki'n perdi bokou.
PAR have person REL-ASP lose much.
'There are people that have lost a lot.'

c) I annan **en dimoun** ki'n perdi bokou.
PAR have ART person REL ASP lose much.
'There is a person that has lost a lot.'

d) **Marmay** i domin zot.
Child PAR dominate 3PL.
'The children dominate them.'

e) **Lipye** i servi pour marse.
Foot PAR serve to walk.
'We walk with our feet.'

(Gillieaux and Choppy 2012: 42)

f) Mon **kote lisye gos** i malad.
POSS side eye left PAR ill.
'My left eye is hurting.'

In (7.7a) *bann* indicates that it is several plants and not only one that are growing in Lamizer, the place the speaker described. In (7.7b), (7.7d) and (7.7e) the bare nouns are still interpreted as plural even though there is no *bann* present. Example (7.7b) is an existential sentence. Similar to Guillemin's (2011)

analysis of Mauritian Creole, it can be assumed that in KS, a bare noun in existential sentences[77] is interpreted as plural. Only if *en* is put in front of the noun, as it is the case in (7.7c), a singular interpretation is possible. Thus, not only in MC, but also in KS *en* functions as a singular marker preventing the default plural interpretation. A similar case can be found in sentences where bare count nouns function as subjects, as it is the case in (7.7d). Again, the bare noun is interpreted as plural, and, as Guillemin (2011) suggests for MC, may also receive an existential meaning. Furthermore, there are words that are conventionally interpreted as plural, such as *lisye* 'eyes', *lipye* 'feet', and *lanmen* 'hands' in (7.7e) (Choppy 2013). If a singular interpretation is required, *kote* is added, such as in (7.7f).

As a consequence, *bann* can be interpreted as a plural marker rather than an article. Similarly, *en* can be regarded as a singular marker rather than an article, at least in existential sentences. The status of *en* in other cases than existential sentences, however, seems to be multifunctional. It does not seem to be marked for (non)specificity or (non)individuation and must thus be associated with singular number only in these cases. However, as has been mentioned in Section 7.2.3 above, in the definite/indefinite distinction, it seems to play a counterpart to *sa*, indicating both singular number and indefiniteness. Thus, if we assume that *bann* is not an article but rather functions as a plural marker, and that *en* seems to indicate indefiniteness as well as singular, the considerations about (in)definiteness, (non)specificity and (non)individuation in Section 7.2.3 can be summarised as follows:

Table 7.6: Markers of (in)definiteness, (non)specificity and (non)individuation in KS.

	Singular	**Plural**
Definite	sa, Ø	sa, Ø
Indefinite	en, Ø	Ø
specific	sa, Ø	Sa, Ø
Non-specific	Ø	Ø
Individuated	sa, Ø	sa, Ø
Non-individuated	Ø	Ø

Taking into account both the distribution of Ø in Table 7.6 and the tendency that contextual factors seem to play a crucial role in KS reference[78], one could argue that bare nouns are the default for all contexts in which knowledge about the referents is mutually shared and can be activated either by linguistic, extralinguistic or conventional information. In cases, however, where a referent has to be

[77] In KS existential sentences are introduced by *i annan*, 'there is'. Existential sentences must be distinguished from other sentences, since the former contain a 'dummy' subject whereas the latter have a lexical or zero subject.

[78] The context-dependency of reference in KS is explored further in Chapter 9.

specified, emphasised, or is not considered to be easily retrievable, the demonstrative *sa* is used. A similar context-dependency seems to guide number marking in KS as well, because *bann* is not necessarily required for a bare NP to receive a plural interpretation.

7.2.5 The KS lexicon

The majority of the KS lexicon has its origins in French. In many of these words, however, have undergone morphological change, as the following examples show:

(7.8)

a) *lili* < le lit, 'bed'
b) *legzanp* < l'éxample, 'example'
c) *latab* < la table, 'table'
d) *zafer* < les affaires, 'thing, affair'
e) *dimyel* < le miel, 'honey'
f) *trangle* < étrangler, 'strangle, choke'

(Choppy (2013) and the Leksik: Kreol Seselwa (2006)).

As is evident from (7.8a-e) the French definite articles *le*, *la* and *les* have merged with the respective nouns in KS. In contrast to French, in KS these are not individual morphemes indicating definiteness or gender. Rather, they constitute a syllable instead of a functional element. Similarly, (7.8f-g) display a merge between the French *de/du* and the respective nouns. Again, in KS these syllables do not assume any grammatical function as is the case in French. Finally, some words are the product of shortening rather than of a merge of an article or preposition and a noun. These are illustrated in (7.8h-i), where it is the first syllable of the French word that has been dropped in KS.

In addition to its French origin, KS also includes loanwords coming from English, Eastern Bantu languages and Malagasy (Michaelis and Rosalie 2009; Choppy 2013). In a study based on Bollée's (1993) *Dictionnaire Étymologique des Creoles Francais de l'Océan Indien* and the knowledge of one native speaker, Michaelis, Rosalie and Muhme (2009) identified a proportion of 13% of a 1880-word corpus to be loanwords. The loanwords most frequently originated in English, with eastern Bantu languages and Malagasy being donor languages in only 1.4% and 1.2%, respectively, of the corpus investigated (Michaelis and Rosalie 2009). Even though English was the highly prestigious language of the colonial masters for a certain period of time on the Seychelles, the traces in the KS lexicon are rather limited, especially if compared to French. The English loanwords found in the KS lexicon are mainly associated with the semantic fields of 'modern world', 'warfare and hunting', 'food and drink'

and ‘the house’ (Michaelis and Rosalie 2009). Similar to the items of French origin, they have been creolised to a certain extent. In modern KS we thus find words such as *ayskrim* > ice cream, *dekersennter* > day care centre, and *drayver* > driver (Gillieaux and Choppy 2012; Choppy 2013).

The few lexical items whose origins can be traced back to Malagasy are found in the semantic field of ‘food and drink’, such as *bwenm* > voan-emba, ‘bean’, or *kanbar* > kambara, ‘yam’, and the semantic field of ‘the house’, such as *kalou* > akalo, ‘pestle’ (Michaelis and Rosalie 2009; Choppy 2013). Most items originating in eastern Bantu languages belong to the semantic fields of ‘religion and belief’, ‘animals’, ‘the body’ and ‘food and drink’ (Michaelis and Rosalie 2009). Examples are *kapatya* > pakatya (Swahili), ‘basket’, *makeket* > ma ekeketele (Kongo), ‘ant’, and *kourpa* > ekhoropa (Makua), ‘snail’ (Michaelis, Rosalie and Muhme 2009; Choppy 2013). Finally, there are also a few loanwords from Indian languages, such as Tamil, which must have come from Mauritius, since the number of indentured workers from India was significantly higher there than on the Seychelles (Benedict 1980). Nowadays, 3% of the population of the Seychelles is of Indian descent, while an additional 4% has been classified as ‘Indian citizens not residing in India’ (Report of the High Level Committee on Indian Diaspora, 2002[79]), which raises the possibility that some Indian loanwords entered the KS lexicon rather recently.

7.2.6 Lexical items of person reference

As every language, KS has several word classes and reference forms at its disposal to refer to individuals. Table 7.7 summarises the distribution of individual word classes and constructions in the current corpus. The majority of references to individuals was expressed by pronouns (73%). The second highest percentage was found in definite references, either in the form of bare nouns or descriptions. Proper nouns, usually in the form of names, constituted 5% of the person references, as did possessive constructions. Other reference forms which were only used sporadically were for example indefinite references or demonstrative pronouns[80].

Table 7.7: Distribution of reference forms used for person reference in the KS corpus.

Reference form	**%**
Pronouns	73
Definite DPs / bare NPs with definite reading	7
Proper nouns /Names	5
Possessive constructions	5
Definite descriptions	3
Others	7

[79] http://indiandiaspora.nic.in/contents.htm [last accessed 2016-08-01].
[80] See Table 7.2 for the differentiation between demonstrative pronouns and demonstrative determiners in KS.

In addition to these formal means of reference, conventional lexical items, such as honorifics and titles play an important role in person reference as well. As Table 7.8 illustrates, certain authorities, such as a doctor, a priest, or a teacher, are not only addressed but also referred to by specific terms. Furthermore, people with a higher status are usually referred to and addressed by *madanm* and *imsye/msye* and their name. Similarly, conventions of politeness result in addressing e.g. strangers as *madanm* and *imsye*/*msye* as well. In some cases, this form of address is combined with the demonstrative *sa*. However, most language consultants in this study agreed that this is a rather new development and that this is associated with a lower level of politeness. In general, combining *madanm* and *imsye/msye* with a last name is regarded as more formal than the combination with a person's first name. An exception is made if this form of address is used by children. In this case, the combination of *madanm* or *imsye/msye* with a first name is regarded to be very respectful. Finally, in the past, respected individuals were also often addressed with the form '*bon* + first name'. However, this convention seems to be disappearing nowadays (Z.-K. Mahoune, p.c.).

Table 7.8: Honorifics and titles in KS.

Status	**Honorifics / Titles**
Doctor	Dokter (+ first / last name)
Priest	Mon per, monsenyer
Boss	Madanm, imsye/msye
Strangers	(sa) madanm, imsye/msye
Teacher	Mis, sir
Generally high status	Madanm (+first/last name), imsye/msye (+first/last name)

Within a family or a circle of friends, KS speakers frequently make use of nicknames[81]. These can be respectful, such as nicknames for grandparents, which are often derived from their first names. Other nicknames, especially among peers, are often rather teasing and are not only based on first names, but also on characteristics of or associations with a certain person. Also, there are certain French expressions to express strong affection, such as (*mon) Coeur, (mon) Chéri* or *mon Ser*. These seem to be used predominantly by the older generations. Furthermore, there are nicknames that are conventionalised to a certain extent and are often used to refer rather disrespectfully to strangers or individuals from whom one would like to distance oneself. Examples for these nicknames are *sa gro fanm / madanm baguette*, hinting at the physical appearance of a female referent, or *madanm tapaze*

[81] I would like to thank Z.-K. Mahoune for pointing out the details of nickname use in KS to me.

/ madanm kankan for a person who always talks about others. In other cases, individual nicknames are created and often combined with *sa enn*, in order to express a social and emotional distance to the designated person.

7.2.7 Lexical items of spatial reference

The word classes used to refer to locations overlap with those of person reference to some extent. However, as Table 7.9 indicates, the distribution of these word classes in the KS corpus differs between person and spatial reference. The two most common forms of spatial reference in the corpus were toponyms (26%) and demonstratives (21%), followed by prepositions (16%). Furthermore, adverbs and pronouns occurred in 9% and 8% of the spatial references, respectively. In contrast to person reference, descriptions, such as relative clauses, were rather rare, both in definite and indefinite form, and are part of the remaining 16%, together with possessive constructions.

Table 7.9: Distribution of reference forms used for spatial reference in the KS corpus.

Reference form	**%**
Toponyms	26
Demonstratives	21
Prepositions	16
Definite DPs / NPs with definite reading	11
Adverbs	9
Pronouns	8
Others	16

Even though the corpus did not include as many adverbs and prepositions as names and demonstratives, they constitute two important word classes of spatial reference. Thus, Table 7.10 summarises the most important spatial terms in KS to express deictic, angular and non-angular information.

Table 7.10: Selected spatial expressions in KS (see Brück (2015: 23) based on Choppy (2013)).

Kreol Seselwa	**Translation**	**Type**
deor, andeor	outside (general), outside (boundary)	containment
anndan, ladan	inside (general), inside (boundary + action)	containment
dan	in	containment
kot, se	at (+ person reference)	location associated with person
ver, ankouri	towards	motion relative to ground object
annaryer, annavan	backward, forward	motion relative to figure
la, isi, akote/o bor, pre, laba, lwen	here, next to, near, there, far	proximity to ground object (horizontal plane)
devan/anfas/vizavi, deryer	in front of, behind	relation to object from the speaker's perspective
a gos, a drwat	left, right	relation to object from the speaker's perspective
dan nor, dan sid, dan les, dan oust	north, south, west, east	cardinal directions
(par) lao, anler	up (in relation to ground object), up (general)	vertical plane
anba	down/below/under	vertical plane
ater	on the ground	vertical plane
lo	on	relation to ground object (vertical plane)
ant	between	relation to two ground objects (vertical & horizontal)
parmi	among	relation to several ground objects (categorization)

As is evident from Table 7.10, in principle all three FoRs can be expressed in KS. Furthermore, in opposition to the demonstrative system which only differentiates between distal and proximal, there are certain adverbs that also express intermediate distance, such as *akote*/*o bor* and *pre*. Finally, *lwen* can express a high degree of distance as opposed to the rather general *laba*. One noteworthy preposition is *dan*, which can be used to convey several meanings. In addition to its literal meaning of spatial containment (7.9a), *dan* can also be extended to the temporal domain and to social

containment in an institution (7.9b-c). Furthermore, (7.9d-e) illustrate that *dan* can also be used in contexts which would be expressed by *from* in English.

(7.9)

a) Pwason pe naze **dan akwaryonm.**
Fish ASP swim in aquarium.
'The fish is/are swimming **in the aquarium**.'

b) Mon manz kornfleks **dan bomaten**.
1SG eat cornflakes in morning.
'I eat cornflakes in the morning.'

c) Zot aprann fer dekoupaz **dan lakres**.
3PL learn make decoupage in kindergarten.
'They learn how to decoupage **in the kindergarten**.'

d) Pti baba i bwar **dan bibron**.
Little baby PAR drink in baby bottle.
'The little baby drinks from the baby bottle.' ((a-d) taken from Gillieaux and Choppy (2012))

e) Mon sorti **dan bwa**.
1SG come.from in forest.
'I come out of the forest.'

(Michaelis and Rosalie 2013, Example No. 56-149)[82]

Finally, the goals of motion events are not marked in KS, as opposed to its lexifier French or the English language, in which prepositions such as *à* or *to* express the notion of a goal. This is illustrated in example (7.10) below:

(7.10)

En gard ti bezwen amenn mon **Ø lopital.**
ART policeman TNS need bring 1SG **Ø** hospital.
'A policeman had to bring me **to** the **hospital**.'

[82] http://apics-online.info/sentences/56-149 [accessed on 2016-06-14]

In addition to adverbs and prepositions, toponyms are an important means of achieving spatial reference. Toponyms in KS are mainly derived from French[83] and have been creolised to a certain extent. Example (7.11) shows some selected toponyms of locations on the main island Mahé, as well as the names of some islands of the Seychelles.

(7.11)

a) Lamizer (La Misère)
b) Trwa Frer (Trois Frères)
c) Mon Fleri (Mont Fleuri)
d) Mae (Mahé)
e) Ladig (La Digue)
f) Silwet (Sillhouette)

7.2.8 Interim summary

The majority of the KS lexicon is derived from its lexifier language French. However, some lexical items have been borrowed from Malagasy, Bantu, and English in individual lexical domains (Michaelis and Rosalie 2009). Similar to the KS vocabulary, in which the individual words have been creolised to some extent, the functional system of pronouns, demonstratives, articles and number markers has undergone some changes as well. The pronoun system is characterised by multifunctionality, i.e. most pronouns remain in the same form irrespective of their subject or object position. Only the first and third person singular pronouns change their form according to their syntactic position and associated function in a sentence. Concerning the demonstrative system, proximity and distance can be expressed by the demonstrative adverbs *isi* and *laba*, respectively. The multifunctional demonstrative adverb *la* can also express proximity, but is rather associated with emphasis and specification, both spatial and temporal. The most prominent demonstrative is *sa*, which occurs alone and in combination with other items, such as *tousala*, and can function as both demonstrative determiner and demonstrative pronoun. Furthermore, while *sa* has been assumed to simultaneously assume the function of a definite article, the current analysis has provided a different approach. The default strategy to mark a noun for (in)definiteness, (non)specificity, and (non)individuation in KS seems to be the use of a bare NP. Only

[83] Except, of course, the capital Victoria, which received its name from the British colonisers.

in those cases were definiteness, specificity and individuation cannot be easily retrieved from the context or mutual common ground, *sa* is used to convey these notions. Furthermore, *en* appears to be the only marker for indefiniteness and only occurs in singular number. In all other cases, *en* assumes the function of a singular marker, unmarked for (non)-specificity and (non)individuation. Its counterpart is *bann*, which functions as a plural marker. Finally, selected lexical items of person and spatial reference have been presented. In person reference, the bilateral kinship terms of KS as well as some honorifics/titles and the use of nicknames has been described. In spatial reference, it has been shown that the adverbial and pronoun system in KS allows for both intrinsic, relative and absolute FoRs, and that most toponyms are creolised versions of French expressions.

The next section turns to the phonological features of co-speech gestures produced by KS speakers when referring to locations and individuals. First, the parameters of handshape, position, movement type and movement quality of such gestures are described. Then it is shown that several of these form features tend to occur in specific combinations according to reference type.

7.3 THE KS GESTURE SYSTEM

7.3.1 Form features of KS gestures associated with spatial and person reference

Similar to lexical and grammatical items of a language system, gestures can also be described systematically (Bressem 2007) according to their form features[84] (see Chapter 3). The KS speakers who participated in the study tended to use the right hand more frequently (64%) as an articulator than the left hand (36%). Thus, the right hand can be diagnosed as the dominant articulator. Other articulators, such as the torso, the head, or the eyes, occurred in combination with hand movement only[85]. Furthermore, the majority of gestures produced were one-hand gestures. Only 14% of all gestures involved simultaneous movement of both hands, 4% accompanying spatial reference and 10% accompanying person reference.

One key feature of gesture form is the configuration of the hand during a movement. Table 7.11 and 7.12 list the recurrent handshapes that were most frequently associated with spatial and person reference in KS. Importantly, some gesture types have more than one form of expression. The *B* handshape, for example, can also occur in an open form, i.e. with an extended thumb, and in a bend

[84] See also Bressem (2007, 2013) for a systematic account of the definition of gestural form features.
[85] There were only two cases in which the head (in combination with eye gaze) or the elbow were used as the only articulators. In both cases, the participants' hands were occupied with craftwork so that they had to use an alternative articulator than their hands.

form. Similarly, the *IX* handshape has an open variant and can additionally occur in a lax form. As the two tables above illustrate, *5*, *B* and *IX* are handshapes that not only occurred frequently in referential gestures but were also associated with both spatial and person reference. Furthermore, while the *purse* handshape was associated most often with person reference, the *A-open* handshape occurred more frequently with spatial reference. However, it is important to note that these two handshapes were not restricted to their respective type of reference but occurred in the other as well. Also, it must be noted that the handshape labelled as *claw* in this study was usually not as clearly articulated during gesture production as it is the case for example in sign languages. However, in the KS corpus, this gesture assumed different functions than for example the *5* handshape (see Chapter 8). Thus, instances in which all fingers of a hand are a) tense and b) not stretched but arced towards the front[86], are analysed as an instantiation of the claw handshape. Furthermore, there were some handshapes that occurred very seldom in general and could thus not be associated with one or the other reference type, shown in table 7.13.

Gestures with the same handshape can have a different orientation of the palm. In the KS gesture corpus no difference could be attested for hand orientation in spatial and person reference. However, in both cases most gestures were produced with one of the following three orientations: palm towards the centre (26%), palm away from body (25%) and palm towards down (21%).

[86] The extent to which the fingers are arced may differ across gestures from rather slightly to very strongly. In those cases, in which no clear differentiation could be made between the *claw* and the *5* handshape, the gesture was analysed as an instantiation of the latter, since the *5* handshape occurs more frequently in the corpus.

Table 7.11: Recurrent handshapes in KS spatial reference.

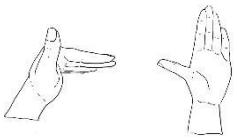
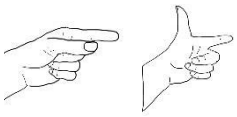
Handshape	Variants	Label	%
		5 (5-lax)	57
		B (B-bent, b-open)	18
		IX (IX-lax, IX-open)	10
		A-open	6
		Claw	6

Table 7.12: Recurrent handshapes in KS person reference.

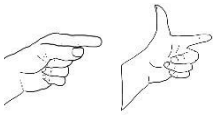
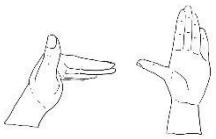
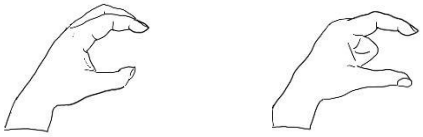
Handshape	Varieties	Label	%
		5 (5-open)	52
		IX (IX-lax, IX-open)	13
		B (B-bent, B-open)	11
		Purse	7
		Claw	7

Table 7.13: KS handshapes with low frequency in spatial or person reference.

Handshape	Label
	C, small C
	F

Gestures associated with spatial and person reference differed from each other in their distribution in gesture space (Table 7.14), which according to McNeill (1992) can be subdivided into four sections: two central areas (centre-centre, centre) and two peripheral areas (periphery, extreme periphery).

Table 7.14: Distribution of KS gestures in gesture space according to spatial and person reference.

Position	% Gestures of spatial reference	% Gestures of person reference
Centre-Centre	6	20
Centre	21	30
Periphery	37	27
Extreme Periphery	36	23

As the table above shows, spatial reference rarely occurred in the centre-centre area. In fact, the two central areas combined (27%) were less often used for gestural expression of spatial reference than the two peripheral areas combined (73%). In other words, spatial reference was established predominantly in peripheral gesture space in KS. Person reference, in contrast, was conveyed in both central (50%) and peripheral (50%) areas to the same extent. Furthermore, in both person reference and spatial reference, there does not seem to be any major distinction between periphery and extreme periphery. Finally, it has to be noted that there were a few gestures that were produced in the very extreme regions of gesture space. Even though they were of only a small number, they constitute an

important part of the KS gesture system, since they complement the findings that in KS the peripheral gesture space is exploited quite frequently. In both spatial and person reference, gestures were produced with an extended arm to the front, a factor that is not accounted for by the subdivision proposed by McNeill (1992). Furthermore, some gestures were produced with an extended arm at the borderline between sideward and back space. In total, 12.2 % of such gestures were associated with spatial reference, and 7.6 % with person reference. The gestures with an extended arm to the front were mainly produced in the two peripheral areas. Furthermore, in these two areas we find nearly as many gestures with an extended arm to the front as gestures with an extended arm to the side or towards the back space.

In addition to handshapes and gesture space, the type of movement is another important phonetic feature of gestures. Table 7.15 summarises the distribution of movement types associated with spatial and person reference.

Table 7.15: Movement types associated with spatial and person reference in KS.

Movement Type	**% Gestures of spatial reference**	**% Gestures of person reference**
arced	19	28
straight	46	40
circular	5	10
wrist (bend, rotation)	22	20
fingers movement only	8	2

In both spatial and person reference, the most frequent movement types (70% and 78% respectively) were those indicating a trajectory, i.e. arced, straight, and circular. Furthermore, in both types of reference, wrist movements comprised roughly 20% of all movement types. However, while in spatial reference, the raising of the back of the hand towards the arm was the most common wrist movement (11% of all wrist movements), in person reference it was the sideward bending of the hand towards the little finger (10% of all wrist movements). Finally, movement that concerned the fingers only, i.e without involvement of the arm or the wrist, was the least frequent in both reference types.

The notion of movement quality indicates whether a gesture is rather large or not, i.e. whether the movement traverses several subsections of gesture space or whether it is expressed within a restricted spatial area only (Bressem 2013). For this, three categories were chosen. ‘L(arge) movements’ not only traverse more than one spatial subsection (e.g. from the centre to the periphery) but also involve the upper arm. ‘M(edium) movements’ may traverse between spatial subsection, but

may also be expressed within one subsection alone. For example, an M-movement can start at the right border of the centre area and end at its left border. Importantly, M-movements involve movement of the lower arm. Finally, 'S(mall) movements' do not involve any arm movement and are always restricted to one specific location in gesture space. Both spatial and person reference were expressed mostly by S-movement (36% of gestures in spatial reference, 38% gestures in person reference) and M-movements (44% of gestures in spatial reference, 50% of gestures in person reference). L-movements occurred the least often. However, if gestures were large, they occurred more often with spatial reference (20%) than with person reference (12%).

7.3.2 Interaction of gestural form features in KS

The gestural form features described above do not occur in isolation but have been shown to interact with each other (Bressem 2007). Thus, an association of handshapes with certain subsections of gesture space can be expected. Table 7.16 shows the distribution of handshapes according to gesture space, showing the percentage of gestures produced with a certain handshape in a certain position of gesture space.

Table 7.16: Distribution of handshapes in gesture space.[87]

	centre-centre		**centre**		**periphery**		**extreme periphery**	
	spatial	**person**	**spatial**	**person**	**spatial**	**person**	**spatial**	**person**
B		12%	29%	28%	39%	24%	29%	36%
IX	11%	30%	38%	32%	37%	19%	14%	19%
A-open					71%			
5		21%	22%	35%	40%	24%	31%	20%
claw		16%	36%	35%	43%	35%	14%	
purse		52%		12%		12%		24%

The *B* handshape was mostly associated with peripheral areas (68% in spatial reference, 60% in person reference). Strikingly, in person reference a higher proportion of *B* handshapes occurred in the extreme periphery (36%) than in spatial reference (19%). In total, the *IX* handshape seems to be predominantly produced in the area between the centre and the periphery, even though the centre-

[87] Note that this table displays only those cases in which more than 10% of handshapes are associated with a certain location in gesture space.

centre (11% spatial reference, 30% person reference) and the extreme periphery (14% spatial reference, 19% person reference) are also represented here. 71% of gestures with the *A-open* handshapes were produced in the periphery. Similar to *B,* the *5* handshape is mainly associated with the peripheral areas. However, this is only the case for spatial reference. In person reference, this handshape is almost equally often produced in both the central areas (54%) and the peripheral areas (46%). *Claw* gestures tend to occupy both centre and periphery in both reference types. Finally, the *purse* gesture, which is only associated with person reference occurs more often in the central areas (64%) than in the peripheral areas (36%).

In sum, handshapes *A-open*, *B* and *5* occured most frequently in the peripheral areas, while the majority of gestures with *IX* and *claw* handshapes assumed an intermediate position between centre and periphery. The handshape *purse* seems to be produced more frequently in the central areas for person reference. Figures 7.1 and 7.2 illustrate this distribution.

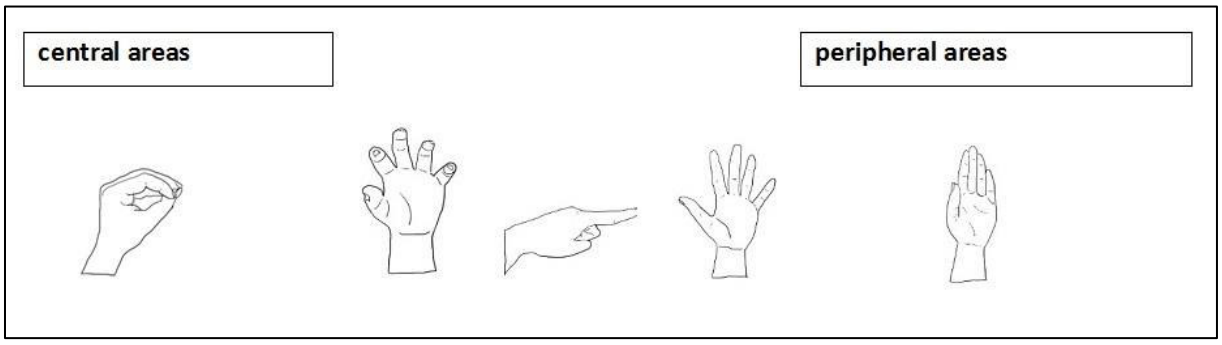


Figure 7.1: Distribution of KS handshapes in gesture space in person reference.

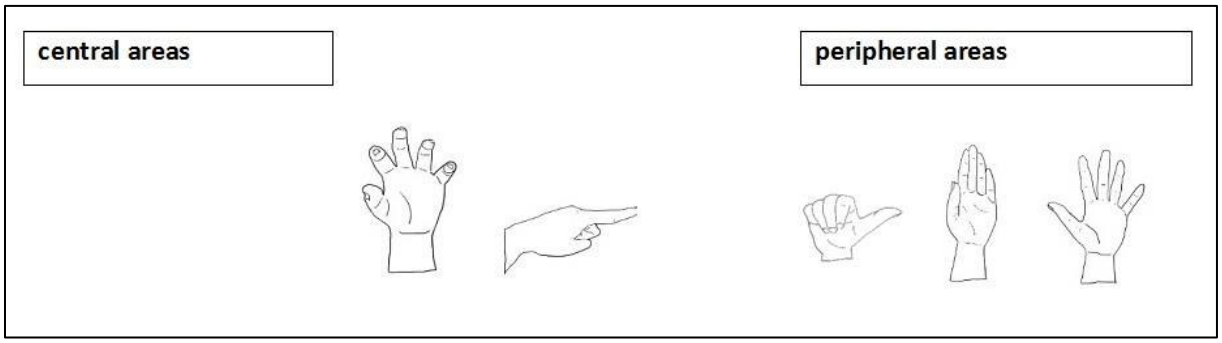


Figure 7.2: Distribution of KS handshapes in gesture space in spatial reference.

Finally, it has to be noted that the gestures in the extreme areas of gesture space, i.e. to the extreme front, and those extended to the borderline between sideward and backspace, were mainly produced with the handshapes *IX* and *A-open.* These handshapes were equally distributed across the two extreme positions in gesture space and were used for both spatial and person reference.

Concerning the association of handshape and movement, no interactive pattern could be found. Since in both spatial and person reference the most common movement types were those expressing a trajectory, i.e. straight, arced and circular, these were also the movement types that were associated with the individual handshapes the most. Similarly, most handshapes were associated with an M- and an S-quality of movement. Only the *claw* handshape was equally associated with L-, S- and M-quality, as was the *A-open* handshape. However, the latter association was only present in spatial reference.

The interaction between handshape and palm orientation, in contrast, did show certain tendencies of association. The *IX* handshape was mostly produced with the palm towards up or towards the centre. Only in spatial reference, it was additionally produced with the palm away from the body, i.e. in prototypical cases of pointing upwards. The *5* and the *claw* handshape were produced with almost all palm orientations in both spatial and person reference. The orientations that occurred the least often with this handshape were palm away from the centre and palm towards the body. Finally, the *B* handshape occurred in three orientations in person reference, i.e. palm towards up, palm towards the body and palm away from the body. In spatial reference, no preferred association of this handshape with a certain orientation could be found. In sum, several tendencies could be attested. First, the orientation of the *IX* handshape seems to be very restricted to two orientations in person reference and three orientations in spatial reference. Second, the *5* and *claw* handshapes seem to be very general gestures that are not associated with any orientation. Finally, the *B* handshape assumes a general role similar to the *5* handshape in spatial reference. In person reference, however, its orientation is more restricted.

7.4 SUMMARY

This chapter has shown that KS speakers make use of several lexical, grammatical, and gestural reference forms to convey information about a location or an individual. In the vocal domain, the KS vocabulary can be traced back to its French origins, with some lexical items of Malagasy, Bantu, and English ancestry. The individual items in the functional system, i.e. demonstratives, pronouns, articles and number markers, have their lexical origin in French as well, but display multifunctionality and reduction on a grammatical level. However, as is demonstrated in the following chapters, this does not imply that reference itself is reduced, but that contextual features guide the interpretation of reference forms.

On a gestural level, several form features of the KS system could be associated with person and spatial reference. Typical handshapes associated with both spatial and person reference are *5*, *B,*

IX, and *claw*, whereas the handshape *A-open* is mainly associated with spatial reference and the handshape *purse* with person reference. Furthermore, the position of gesture articulation in gesture space differs in person reference as opposed to spatial reference. While gestures associated with the former are equally distributed across central and peripheral areas, gestures associated with the latter occur more often in the peripheral areas. The distribution of movement types is similar for both spatial and person reference as is the quality of movement. However, if gestures are produced with an L-quality, they are mostly associated with spatial reference. Finally, some of the individual form features also tend to co-occur with one another. Individual handshapes have been found to be associated with certain positions in gesture space, as well as with certain orientations, with some idiosyncratic associations for spatial and person reference respectively. No association was found between individual handshapes and movement types or movement qualities.

In this chapter, multimodal reference marking in KS has been described on the semantic level. Following the tripartite approach to reference, the next chapter analyses the mobilisation of these forms in situated communicative interaction. The analysis shows that gestures and speech are closely intertwined and that this interaction is characterised by a certain complexity. Furthermore, examples are be provided that illustrate how contextual features and information structure shape the production and interpretation of individual multimodal reference forms.

8 KS SPATIAL AND PERSON REFERENCE IN MULTIMODAL INTERACTION

8.1 INTRODUCTION

After the description of form features of KS spatial and person reference in the previous chapter, their mobilisation in communicative interaction is now investigated. This chapter analyses the KS data according to the theoretical assumptions about spatial reference and person reference which were introduced in Chapter 2.4 and 2.5. Furthermore, the interaction of gestures and speech in KS reference is illustrated. It is shown that in KS, gestures and speech are closely intertwined and create reference in interaction with each other.

Section 8.2 first describes the temporal, semantic and semiotic interaction between gestures and speech, followed by Section 8.3, which focuses on the multimodal expression of spatial reference in communicative interaction. It is shown that gestures and speech interactively express figure-ground relations and that KS speakers apply several strategies to describe non-angular relations. In Section 8.4, multimodal reference to individuals is described. Several examples illustrate the ranking of preferences for initial person reference in KS, as well as the interplay between gestures and speech in subsequent person reference.

8.2 CO-SPEECH GESTURE INTERACTION ON A TEMPORAL, SEMANTIC, AND SEMIOTIC LEVEL

Gesture and speech do not occur in isolation but interact with each other. In communicative interaction, KS speakers produced co-speech gestures quite frequently: in the KS corpus analysed for this study, gestures accompanied speech in 79% of the time. Furthermore, the gesture units produced by KS speakers usually extended across clause boundaries in speech and, on average, consisted of 5 strokes. Taking McNeill's (1992) notion of co-expressiveness and synchrony of speech and gestures into account, this multimodal interaction can be investigated regarding the semantic and temporal relation of the two components (Ladewig and Bressem 2013). Furthermore, the semiotic relation, i.e. whether a gesture expresses deictic, iconic, or emblematic information in relation to an utterance in speech, is an important factor of co-speech gesture interaction as well (Ibid.).

The distribution of temporal, semantic, and semiotic relations in the KS gesture corpus are illustrated in Figures 8.1 - 8.3. The majority of gestures analysed in the KS corpus fulfils McNeill's (1992) criterion of synchrony, with 80% being produced parallel to the utterance of a referent in speech (Figure 8.1). Only one percent of all gestures were produced without speech, and notably, these were

associated with spatial reference only. The remaining 19% were also produced in a temporal overlap with the corresponding utterance in speech, but either started earlier than the utterance (13%) or were still carried out after the utterance (6%). These temporally displaced gestures occurred slightly more often in person reference (22%) than in spatial reference (16%).

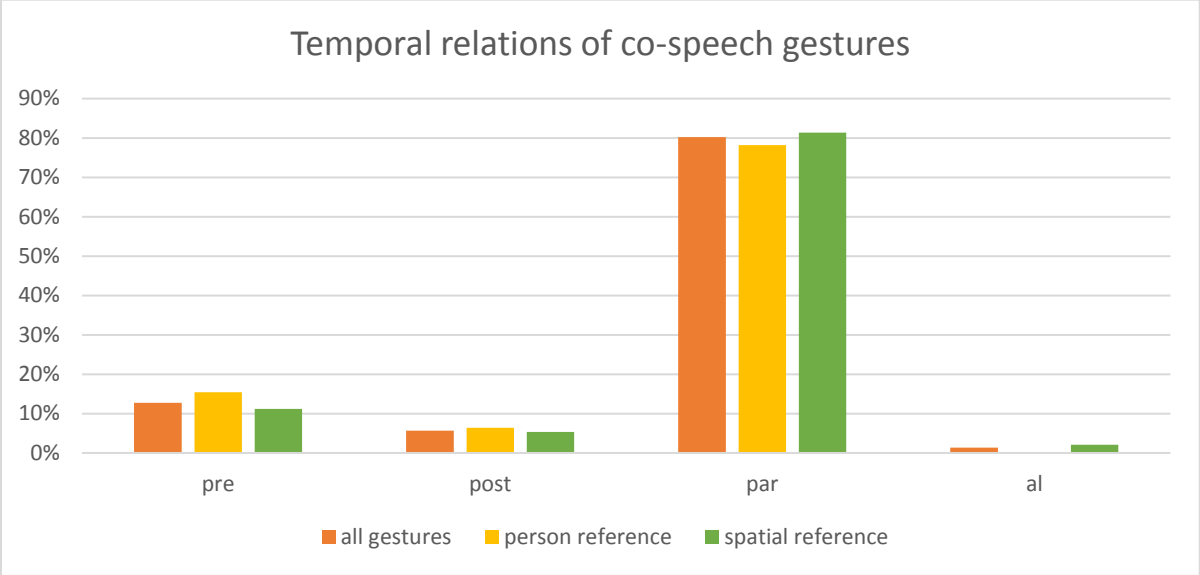


Figure 8.1: Temporal relations of co-speech gesture interaction. Pre: gestures starting earlier than the speech counterpart post: gestures that are delayed and end after their speech counterpart, par: parallel, al: alone.

Example (8.1) illustrates the different temporal relations. In (8.1.a), the first gesture occurs before its counterpart *la*. The second gesture is produced synchronously with its counterpart *li*. In (8.1b), the first gesture is produced parallel to its counterpart *partou*, whereas the second gesture occurs after the referent *dan bann plat* has been uttered.

(8.1)[88]

		S1	S2
		****	***
a)	Same	(...) la.	Li i fek vin la.
	Same	DEM.	3SG PAR ASP come DEM.

'Same over here. S/he just came here.'

S1: Art-rh, hs-B-open, P-TC, mov-straight, qu-M, pos++3
S2: Art-rh, hs-5-lax, PT-C, mov-straight, qu-S, pos+2

[88] Following Kendon (2004b), all strokes will be marked by *** and S_n with their position indicating the temporal co-occurrence of the respective stroke with speech.

S1 S2
*** ***

b) Toultan i flood partou, dan bann plat sirtou.
Every time PAR flood everywhere, in PL flat especially.
'Every time it floods everywhere, especially in the flat areas.'

S1: Art-rh, hs-B-open, P-TC, mov-bendp, qu-S, pos+2
S2: Art-rh, hs-5, P-TD, mov-arced, qu-M, pos+3

On a semantic level, McNeill's (1992) criterion of co-expressiveness is also met in KS gestures (Figure 8.2). A total of 64% of all gestures were redundant with speech, i.e. both parts expressed the same semantic content, whereas 31% of all gestures expressed some complementary information about the referent. Only 1% of all gestures conveyed information that seemed to contradict the counterpart expressed in speech. Finally, 4% of gestures expressed information without any vocal counterpart, thus replacing the utterance of a referent in speech. The four categories of semantic relation differ depending on the type of reference. Gestures associated with person reference were more often redundant (64%) than gestures associated with spatial reference (56%). In turn, gestures of spatial reference conveyed complementary information more often (39%) than gestures of person reference (23%).

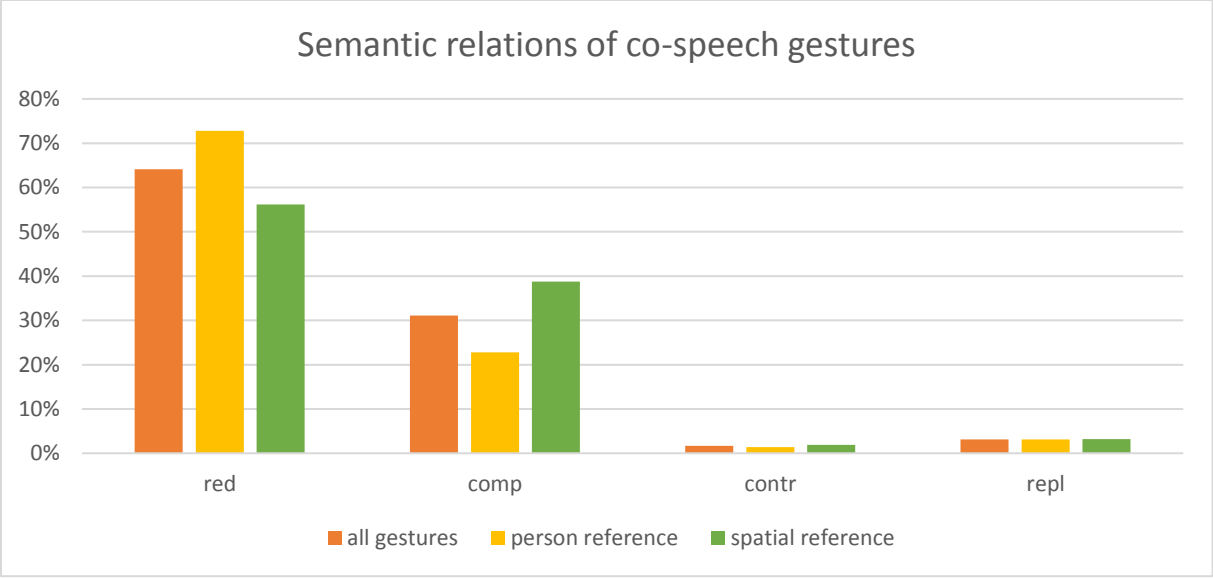


Figure 8.2: Semantic relations of co-speech gesture interaction. red: redundant, comp: complementary, contr: contradicting, repl: replacing.

The different semantic relations are illustrated in examples (8.2) below. In (8.2a), the speaker produces three gestures. The first gesture is an instance of metaphorical pointing referring to the location in general. Thus, this gesture is redundant to its counterpart in speech. The two subsequent gestures, on

the other hand, convey complementary information. They are also instances of metaphorical pointing, but in this case, two different loci in gesture space are used to refer to the two individual islands which are subsumed by the toponym *Les Sœurs / Sister Islands/ De Ser*. These two gestures can be considered to be complementary to speech, since they do not only express that the referent is actually two instead of one island, but also show the relative location to each other and to La Digue: their position next to each other rather than one below the other is reflected in the gestures. In (8.2b), the speaker produces two gestures accompanying the person reference in speech. The first gesture points towards the former residence of the deceased neighbour and thus conveys complementary information. The second gesture, however, seems to contradict the person reference in speech it accompanies. While on the vocal channel, the name of the deceased neighbour is uttered, the gesture points directly to another participant of the conversation. This apparent contradiction can only be resolved when taking into account the previous discourse. A few minutes earlier the other participant also mentioned the deceased neighbour. Thus, S2 can be interpreted as an interactive gesture which acknowledges the other speaker's previous comment, rather than pointing towards the referent conveyed in speech. Finally, in (8.2c), the speaker explains that her children live rather close to each other. This utterance includes spatial reference, but only describing the relative distance between the children's residences. In gesture, however, we find information that does not have a counterpart in speech, namely the direction in which the children's residences are located. Further evidence that this instance of direct pointing constitutes a case of a gesture replacing speech comes from the fact that it is produced during a pause.

(8.2)

S1/ S2/ S3
//**

a) Ile (…) sa de ser.

Island DEM two sister.

'Ile de ser (islands near La Digue).'

S1: Art-lh, hs-IX, P-TD, mov-bend1, qu-S, pos++2
S2: Art-lh, hs-IX, PT-D, mov-arced, qu-M, pos++2
S3: Art-lh, hs-IX, PT-D, mov-straight, qu-S, pos++2

S1 S2
******** **

b) Mon lot vwazen ki' n mor, Msye D., en ler ti la.
POSS other neighbour REL-ASP die, Mr. D., ART time TNS DEM.
'My other neighbour, who has died, Mr. D., was here at times.'

S1: Art-lh, hs-IX, P-TC, mov-bend1, qu-S, pos++2
S2: l Art-h, hs-B-open, P-TC, mov-straight, qu-S, pos+3

S1
***

c) Mon bann zanfan (…) pa reste lwen ek kanmarad.
POSS PL child NEG stay far with REC.
'My children don't live far away from each other.'

S1: Art-rh, hs-5, P-AB, mov-straight, qu-M, pos+4

Finally, on a semiotic level, a tendency towards a preference of deictic gestures (58%) over iconic gestures (42%) can be attested for the referential gestures in the KS corpus[89] (Figure 8.3). The majority of deictic gestures were metaphorical pointing gestures, i.e. gestures expressing Bühler's (1965 [1934]) deixis am phantasma, followed by direct pointing gestures and metonymic pointing gestures, respectively. A considerable part of iconic gestures was used to model a referent or to depict it metaphorically, such as treating a location as an object that can be held in one's hand. Only a small part of iconic gestures was used to enact the vocal counterpart. This, however, is not surprising given that the focus of spatial and person reference lies on entities rather than actions. Similar to the findings concerning the semantic relation, the analysis revealed a difference between spatial and person reference in the semiotic relation between gestures and speech. In gestures associated with person reference, metaphorical pointing was more common than metonymic pointing, with direct pointing being the least common deictic expression. In spatial reference, in contrast, metonymic pointing was rather rare, while direct and metaphorical pointing gestures were more common. On the iconic level, two differences can be found. First, while 32% of gestures of spatial reference were iconic, this was the case for only 15% of gestures of person reference. Second, in spatial reference, modelling gestures were more common than metaphorical icons, whereas in person reference the opposite was the case.

[89] No emblems related to spatial or person reference were found in the corpus. However, some other emblems are presented in Chapter 10.

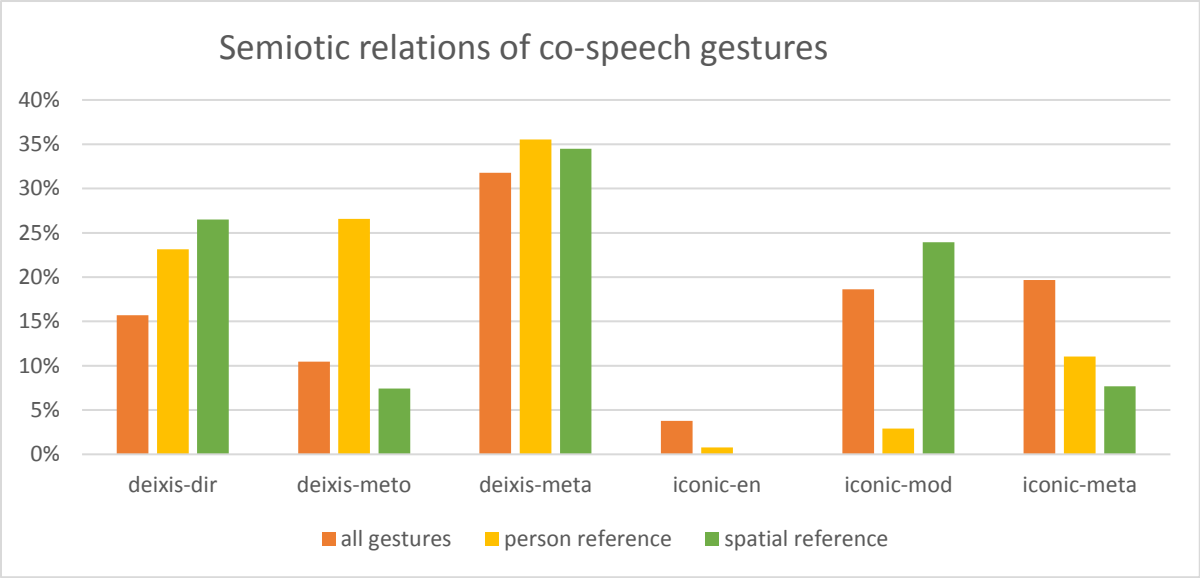


Figure 8.3: Semiotic relations of co-speech gesture interaction. Deixis-dir: direct pointing, deixis-meto: metonymic pointing, deixis-meta: metaphorical pointing, iconic-en: enactment, iconic-mod: modelling, iconic-meta: metaphorical icons.

The different semiotic relations are illustrated by examples (8.3) – (8.5) and the corresponding figures (Figures 8.4 and 8.5). In (8.3), the speaker produces three subsequent direct pointing gestures, one into the direction of the houses that are close to the sea, and two that are directed towards the sea behind her (see Figure 8.4).

Figure 8.4: Direct pointing.

(8.3)

S1 S2 S3
*** ***/******

I annan plen lakaz ki obor delo sale.

PAR have enough house REL next water salt.

'There are many houses that are near the sea.'

S1: Art-rh, hs-5, P-Tu, mov-straight, qu-S, pos+4
S2: Art-rh, hs-5, P-Td, mov-arced, qu-M, pos-4
S3: Art- rh, hs-5, P-AC, mov-arced, qu-M, pos+4

In (8.4), the speaker refers to her two daughters in her speech (*son bann ser*). This utterance is accompanied by two pointing gestures, which are directed towards the locations of the two daughters' residences (Figure 8.5). Thus, the gesture is an instance of metonymic pointing, in which a location is used to refer to a person associated with it.

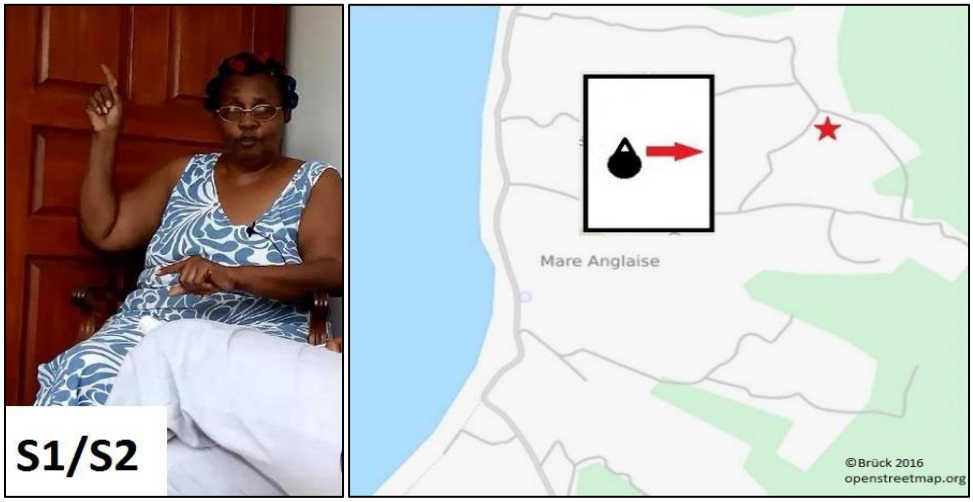


Figure 8.5: Metonymic pointing.

(8.4)

S1 S2
/

I pou call son bann ser.

3SG TNS call POSS PL sister.

'He will call his sisters.'

S1: Art-rh, hs-IX, P-AB, mov-bend5, qu-S, pos+3
S2: Art-rh, hs-IX, P-AB, mov-bend1, qu-S, pos+3

In (8.5), the speaker refers to a hypothetical neighbour and other people of this hypothetical neighbourhood. Both referents, *sa vwazen,* 'that neighbour' and *kanmarad*, 'each other', are accompanied by two pointing gestures directed into empty space (Figure 8.6). In these instances of metaphorical pointing, two different loci are assigned to refer to two different referents.

Figure 8.6: Metaphorical pointing.

(8.5)

	S1					S2 S3
	**					**/**
Sa	vwazen	la	i	pou koupe, i	pou partaze (..)	avek kanmarad.
DEM	neighbour	DEM	PAR TNS	cut, 3SG TNS	share	with REC.

'This neighbour will cut [the bananas] and will share it with others.'

S1: Art-rh, hs-IX, P-AB, mov-straight, qu-S, pos+4
S2: Art-rh, hs-C, P-AC, mov-straight, qu-M, pos+2
S3: Art-rh, hs-claw, P-AB, mov-arced, qu-L, pos+2

In sum, the gestures produced by KS speakers are in close relation with their vocal counterparts. On a temporal level, the majority of gestures were found to be produced parallel or at least in temporal overlap with speech. On a semantic level, the majority of gestures can be described as redundant[90] to speech. In other cases, the gestures conveyed complementary information about spatial or person referents. Redundancy of gestures as well as the information conveyed by gestures without a counterpart in speech was higher in person reference than in spatial reference. Finally, on a semiotic level, deictic gestures were more common than iconic gestures. It was illustrated that deictic

[90] However, as is illustrated in the following chapters and discussed in Chapter 11, this redundancy does not imply that those gestures do not add anything to speech.

gestures are not only used to directly point to referents, but also to establish metonymic and metaphorical deixis. Also, the individual ranking of subtypes of deictic or iconic gestures differed in spatial reference as compared to person reference.

These findings highlight two important aspects of co-speech gesture interaction. First, KS gestures are in line with McNeill's (1992) assessment of gestures as synchronous and co-expressive. Second, KS gestures are sensitive to the type of reference, i.e. they behave differently on a semantic and on a semiotic level depending on whether they convey spatial or person reference. This latter finding is further explored in the following two sections. Section 8.3 focuses on the interaction of gestures and speech in different aspects of spatial reference, whereas Section 8.4 uncovers aspects of multimodal reference to individuals.

8.3 Multimodal Reference to Space

8.3.1 Multimodal expression of figure-ground relations

As mentioned in Chapter 2.4, spatial configurations can be described with regards to the relation between a figure and a ground object. The figure is the entity which is anchored with the help of a ground (Talmy 1983, 2000). In a multimodal interaction, there are different possibilities of how this relation can be expressed. In the analysed corpus, the distribution of figure and ground in speech was more or less equal, even though the ground (57%) was expressed slightly more often than the figure (43%). There are two reasons for this increased representation of ground tokens in speech. First, figure-ground relations were only annotated for references to individuals and locations. If for example an object rather than a person was the figure in a clause, this token was not included in the statistics. Furthermore, as is discussed in Section 8.4 below, there are also some occurrences of finite clauses lacking an overt subject, preventing the implied subject from being included in the statistics. Thus, in general, it can be assumed that in speech the number of figure tokens was higher than 43%, especially taking into account clauses in which a figure was not located with respect to a ground object. In contrast to speech, in the gestural modality it was the ground which was expressed in gesture most often (85%).

A closer look at the co-speech gesture interaction of figure and ground representation reveals that KS speakers produce three overall strategies to express this relation. First, both figure and ground can be expressed in speech, with an additional gestural element expressing redundant or complementary information on the ground. This strategy, which occurred in 44% of all multimodal expressions of figure and ground, is illustrated in (8.6) and Figure 8.7 below. In this example, the

speaker verbally refers to one of her daughters, *Y.*, and locates her with respect to the ground *anler laba*, i.e. her residence. This utterance is accompanied by two direct pointing gestures, not only reinforcing the ground but also adding further spatial information about the direction in which the ground is located.

Figure 8.7: Gestures referring to the ground, while both figure and ground are uttered in speech.

(8.6)

S1	S2
**	*****

Y. i en pti pe pli pre avek li anler laba.

Y. PAR ART little bit more near with 3SG up DEM.

'Y. is a little bit closer over there.'

S1: Art-rh, hs-B, P-AB, mov-straight, qu-M, pos+4 (Ground)

S2: Art-rh, hs-B, P-AB, mov-straight, qu-M, pos+4 (Ground)

The second strategy (22%) involves an expression of the figure by speech and a reference to the ground by gesture, as illustrated by (8.7) and Figure (8.8). Here, the participant refers to the same daughter as in (8.6), but only expresses the figure*, mon fiy*, 'my daughter', in her speech. The location of the figure with regard to a ground is established by two small gestures, which again indicate the direction towards the daughter's residence.

Figure 8.8: Gestures referring to the ground, while only the figure is uttered in speech.

(8.7)

	S1		S2
	**		***
Mon kapab dir	ou mon fiy	i	mon neighbour.
1SG able	say 2SG POSS daughter	PAR	POSS neighbour.

'I can tell you that my daughter is my neighbour.'

S1: Art-rh, hs-5-lax, P-AB, mov-straight, qu-S, pos+4 (Ground)

S2: Art-rh, hs-5-lax, P-AB, mov-straight, qu-S, pos+4 (Ground)

Finally, another 22% of figure-ground relations were expressed solely in speech, with no involvement of the gestural modality, such as in (8.8) below. The speaker herself is the figure, referred to by the 1st person singular pronouns. She mentions two grounds according to which she locates herself, i.e. dan *lakour*, 'at home', and *kot C*, 'at C's house'.

(8.8)

Mwan, **mon** pass lanmwatye **dan lakour**, lanmwatye **mon** al **kot C**.

1SG 1SG pass half at home, half 1SG go at C.

I pass part of the day **at home**, part of the day **I** go **to C's house**.

The remaining figure-ground relations were referred to by two minor strategies. In 6% of all cases the figure was expressed in both speech and gesture, with the ground being represented on the vocal channel only. Another 7% involved an expression of both elements in both speech and gesture, thus constituting cases of maximum redundancy.

In sum, information about the ground seems to be strongly rooted in the gestural modality in KS reference. Even though the figure can be referred to by gestures as well, this seems to be a strategy only rarely applied, leaving the figure to be expressed mainly by the vocal channel. Thus, gestures seem to complement speech in this respect, either providing additional information about the ground or emphasising the nature of the ground if it is also expressed in speech.

8.3.2 Multimodal expression of angular and non-angular relations

As mentioned in Chapter 2.4, spatial reference can be categorised into angular, non-angular and deictic information. Non-angular spatial information does not involve a coordinate system since it is based on coincidence, contiguity, contact and proximity of the figure and the ground (Levinson and Wilkins 2006). However, as soon as figure and ground are further apart and not in contact with each other, a coordinate system is applied in the form of one of the three frames of reference (Levinson 2003). Finally, deictic expressions may occur in combination with both angular and non-angular relations. If a speaker points towards a figure that is either close to him/herself or close to another ground object, the spatial information may be described by non-angular relations[91]. If the figure, which is deictically referred to, is not part of or close to the ground object, it can be located by a non-angular description[92].

Gestures accompanying non-angular spatial relations were mainly metaphorical pointing gestures, followed by direct pointing and iconically modelling gestures. The majority of these gestures were expressed by the *B*, *IX*, and *5* handshapes. In angular spatial relations the results are mixed due to different strategies not only being applied in gesture and speech, but also across individual types of data. Starting with semi-spontaneous data coming from locally-anchored narrations, and spontaneous route descriptions[93], we find a predominant use of the relative frame of reference in speech (see example (8.9a)). Even though the language allows its speakers to express intrinsic and absolute FoRs as well, this was only the case in a few utterances (8.9b-d).

(8.9)

a) Si ou ale Beau Vallon fer semen **kote gos**. (relative)
If 2SG go Beau Vallon make road side left.
'If you go to Beau Vallon you need to take the road to the left.'

[91] For example, *Can you pass me this cup*, or *The cup is over there on the counter*.
[92] For example, *The cup is over there left to the fridge*.
[93] Two participants produced route descriptions in a spontaneous conversation, whereas the other participants were explicitly asked to describe a route.

b) I ti fer mwan byen per kantmenm mon ti la anler **lo latet montanny**. (intrinsic)
PAR TNS make 1SG good fear even though 1SG TNS DEM up on head mountain.
'I was very afraid, even though I was on the top of that mountain.'

c) Ordinerman sa ki amenn ou legliz i amen ou ziska **devan**. (intrinsic)
Usually DEM REL bring 2SG church 3SG bring 2SG to front.
'Usually the one who brings you to the church is the one who brings you to the front.'

d) Ou pou al anvil, ou mont en kote **dan nor.** (absolute)
2SG TNS go town, 2SG go.up ART side in north.
'You will have to go to town and go up to the north.'

In (8.9a), the participant describes a route in a transposed setting from the traveller's perspective. Thus, she refers to a road as 'the one to the left' from the traveller's perspective, which is clearly an instance of a relative FoR. Examples (8.9b) and (8.9c) illustrate the use of an intrinsic frame of reference. In (8.9b), the speaker uses the intrinsic features of a mountain, i.e. its top as opposed to its foot or its mountainside, to locate a figure. In (8.9c), the intrinsic features of a church, i.e. having a front with an altar and a back where the main entrance is located, are used to locate the goal of a motion event. Finally, in (8.9d), the participant explains the route from Victoria to Beau Vallon. The latter location is described as being north of Victoria, i.e. it is referred to by means of an external coordinate system. Furthermore, the topographic features of the route are referred to by the verb *mont(e).*

Strikingly, the distribution of FoRs differs if the gestural domain is taken into account as well. The majority of gestures produced in locally-anchored narrations, route descriptions and the pointing tasks displayed some absolute features as well. The data contains a high number of direct pointing gestures that were also constant under rotation. This veracity could be found most often in reference to existing locations on Mahé, illustrated by Figure 8.9.

Figure 8.9: Veracity of pointing referring to a location.

The choice of FoRs in gestures accompanying route description was very variable and often even changed within one single description. While the path descriptions were often accompanied by relative gestures, absolute gestures occurred most often when the starting point, endpoint or stopovers were referred to. Furthermore, a certain distribution of handshapes similar to Levinson's (2003) criteria was found. The *IX* handshape was mainly used to refer to or specify certain locations in the immediate surroundings, while the two flat handshapes *B* and *5* mainly referred to existing locations beyond the immediate surroundings. These references, however, were often not specific but rather indicated a general direction or vector. Furthermore, in route descriptions they were associated with the path rather than with individual locations. Also, as has been described Chapter 7.3.2 (see Table 7.17), both *5* and *B* gestures were mainly produced in the peripheral areas including sideward and back pointing. Examples (8.10) – (8.12) and the corresponding figures below illustrates this distribution of handshapes.

Figure 8.10: IX handshape in direct pointing to a specific location.

(8.10)

S1
****

I ti fer mwan byen per kantmenm mon ti la anler **lo latet montanny**.
PAR TNS make 1SG good fear even though 1SG TNS DEM up on head mountain.
'I was very afraid, even though I was on the top of that mountain.'

S1: Art-lh, hs-IX, P-AB, mov-straight, qu-L, pos+4

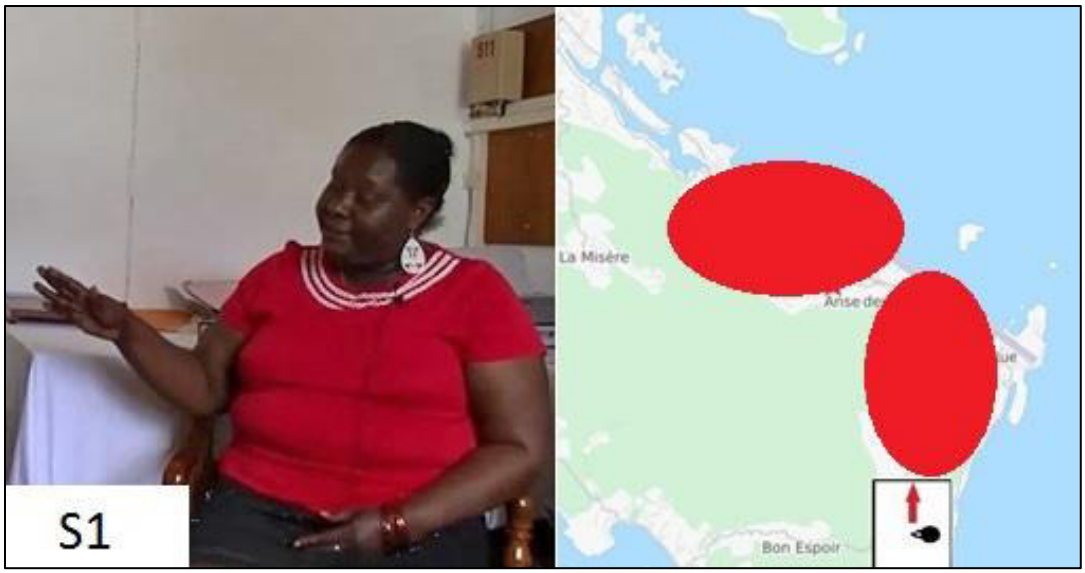


Figure 8.11: B handshape in direct pointing to a larger area/multiple unspecified locations.

(8.11)

S1
****

Toultan i flood partou. Dan bann plat sirtou, bann ki reste en pe o bor delo

Always PAR flood everywhere. In PL flat especially, many REL stay ART little next water

sale.

salt.

'It always floods everywhere. Especially in the flat areas, those who live a bit near the sea.'

S1: Art-rh, hs-B, P-TD, mov-straight, qu-M, pos+4

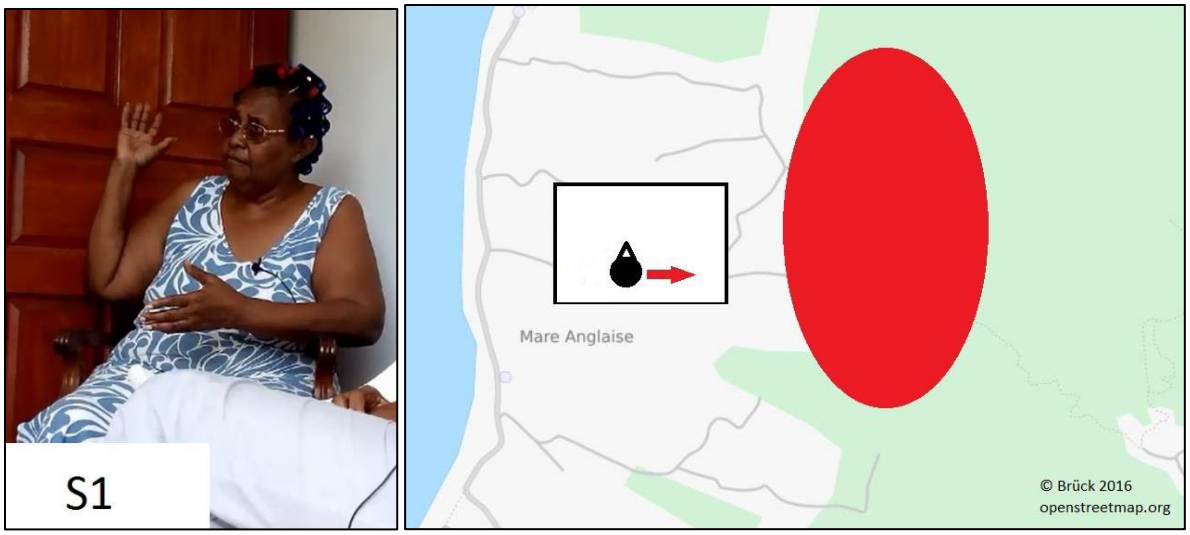


Figure 8.12: B handshape in direct pointing to a larger area (S1).

(8.12)

S1 S2 S3
*** ****/****

Mon bann zanfan (…) pa reste lwen ek kanmarad.

POSS PL child NEG stay far with REC.

'My children do not live far away from each other.'

S1: Art-rh, hs-5, P-AB, mov-straight, qu-M, pos+4
S2: Art-rh, hs-5, P-AB, mov-straight, qu-S, pos+4
S3: Art-rh, hs-5, P-AB, mov-straight, qu-S, pos-4

Further indicators for an absolute FoR in the gestural modality are illustrated in Figures 8.13 – 8.16 below. Here, the participant describes a route starting and ending in Victoria (Figure 8.13). This description consists of three path segments. In the first segment (Figure 8.14), the participant's gestures not only indicate the direction of Victoria and the path emerging from there, but it also follows natural lines. This means that the further away the individual locations on the path, the higher the gestures in gesture space. Furthermore, the participant merges iconic and deictic features: while the deictic feature is expressed by the vector projected from the arm, the hand expresses an iconic element by metaphorically holding the individual locations as if they were an object. Towards the end of path segment one and continuing throughout the second path segment the natural lines are also metaphorically extended. Instead of indicating the distance between the individual locations and the speaker, the increasing height of the gestures parallels the distance travelled, even when the path approaches the speaker's location (Figure 8.15). At the same time, the deictic element decreases and the vector projected by the arm only indicates the general direction of the overall path. Finally, in the third path segment (Figure 8.16), the gesture lacks any deictic element. Instead, the participant models the topological features of this segment, indicating two hills and a valley that have to be crossed to get back to Victoria. Strikingly, the participant used only toponyms in her path description, thus leaving information about the direction, distance and topology of the task to be expressed in the gestural modality only.

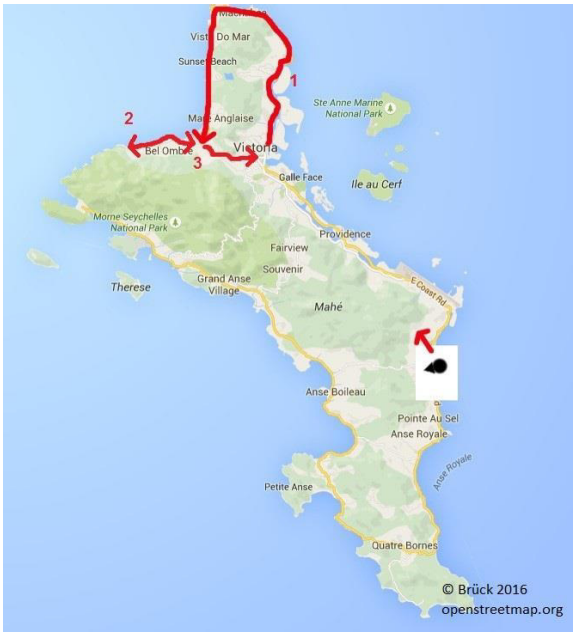


Figure 8.13: Path segments of a spontaneous route description and participant orientation (Brück 2016).

Figure 8.14: First path segment of a spontaneous route description, including deictic and iconic elements (Brück 2016).

Figure 8.15: Second path segment of a spontaneous route description, including deictic and iconic elements (Brück 2016).

Figure 8.16: Third path segment of a route description, including an iconic modelling of topological features (Brück 2016)

Finally, body torque was found to be restricted, as the occurrence of gestures produced sideward and to the back already indicate. In example (8.13), illustrated by Figure 8.17, the participant refers to a location which is located behind her with a gesture produced to the side and directly pointing to this referent[94]. The orientation of her body, as well as her eye gaze, however, remain the same.

[94] As example (8.13) already suggests, and as is further discussed in section 8.4.3, this pointing gesture is an instance of metonymic pointing, in which person and spatial reference are combined, similar to the case illustrated in Figure 8.5 and example (8.4). Nevertheless, the gesture in Figure 8.17 points towards a location, i.e. the location of the neighbour's residence, which is only in a second step of abstraction connected to the person reference produced in speech.

Figure 8.17: Direct pointing to the back without body torque or accompanying eye gaze

(8.13)

	S1 ***
Mon konn	Msye D. la borlanmer.
1SG know	Mr. D. DEM beach.

'I know Mr. D. there at the beach.'

S1: Art-lh, hs-A-open, P-TC, mov-arced, qu-M, pos-4

The findings provided by the analysis of locally-anchored narrations are further supported by the multimodal reference produced in the elicitation tasks (see Table 8.1 below). In the pointing task, participants were asked to point into the direction of individual locations on Mahé as well as to individual islands in the vicinity. As Table 8.1 and Figure 8.18 show, the veracity of pointing gestures observed in the locally-anchored narrations is displayed in the gestures of the pointing tasks as well. However, there were some locations that were pointed at incorrectly by almost all participants, such as individual islands near Mahé. While the two biggest islands apart from Mahé, Praslin and La Digue, usually could be pointed at without any difficulties, smaller islands, such as Ile Thérèse, were often located in the wrong directions[95].

[95] In addition, some younger participants also reported that they had heard of this island but did not know where it was.

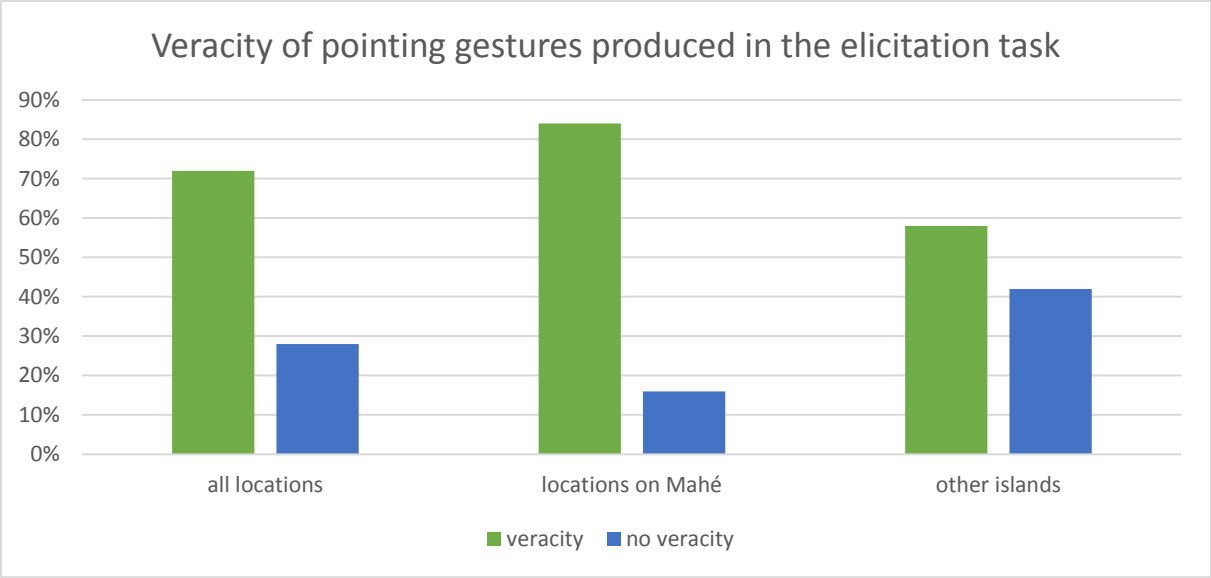


Figure 8.18: Veracity of pointing gestures produced in the elicitation task.

This may be due to the fact that individual locations on Mahé, as well as on Praslin and La Digue, play a more important role in the everyday life of the participants, while other locations, such as Ile Thérèse, are not frequently visited. Thus, the lack of veracity in pointing gestures towards this referent appears to be an effect of lack of knowledge or familiarity rather than a switch to another FoR. Furthermore, body torque was never involved, even if the referents were located towards the back of the participants. Eye gaze followed the pointing gestures only in those cases in which the referent was located towards the front of the participants, i.e. when their orientation was set towards these referents coincidentally throughout the communicative interaction. In all other cases in which pointing gestures were produced towards the side or to the back of the referents, eye gaze was not involved. Two instances of eye pointing and one instance of elbow pointing without the involvement of a manual gesture were observed. In one of these cases the participant reacted to the interviewer's request for pointing which was directed towards the other participant. Since the first participant did not want to intervene, her spatial reference was reduced to eye movement. In the other two cases, one instance of eye pointing and one elbow point, the participant's hands were occupied, which caused her to resort to alternative articulators. Furthermore, all gestures produced in the pointing task were produced in the extreme periphery, towards the side and towards the back, and usually involved large gestures. Pointing gestures accompanied by utterances indicating the direction of a location were usually produced with the *B* or *5* handshape, while the other gestures displayed an extended index finger. Only one participant used an *A-open* handshape when she pointed to a location at her back.

Table 8.1: Characteristics of gestures produced in the three elicitation tasks.

	pointing tasks	**route descriptions**	**man & tree**
handshapes	5, B, IX	5, B, IX, A-open, claw	5, B, IX, claw
veracity	for common locations only	partially	no
body torque	no	no	n.a.
eye gaze	no	no	n.a.
movement	straight	straight, arced	straight, arced, circular
position	extreme periphery, sideward and back space	peripheral and central areas	centre, centre-centre
quality	L	L/M/S	M/S
fusion of semiotic types	n.a.	partially	no

In elicited route descriptions gesture production was more variable. As Table 8.1 shows, more handshapes were applied, which is due to the fact that both iconic and deictic gestures were produced. This also caused gesture production across all four subsections of gesture space. Furthermore, a veracity of deictic elements could only be partially attested. Participants frequently switched between FoRs during one and the same route description. Figure 8.1 below illustrates this switch. The participant describes the route from Victoria to Takamaka, which is at the opposite end of the island. First, she lists several toponyms, which she accompanies by direct pointing gestures oriented towards the direction of Takamaka (S1). However, when her route description mentions one stopover at Anse Royale, the absolute orientation of her gestures is exchanged with gestures indicating the viewpoint of the traveller (S2 and 3). Towards the end of the path description, when she describes the bus stop at Takamaka and its surroundings, her gestures are again oriented towards the actual spatial setup of these locations instead of expressing it from the point of view of the traveller (S4).

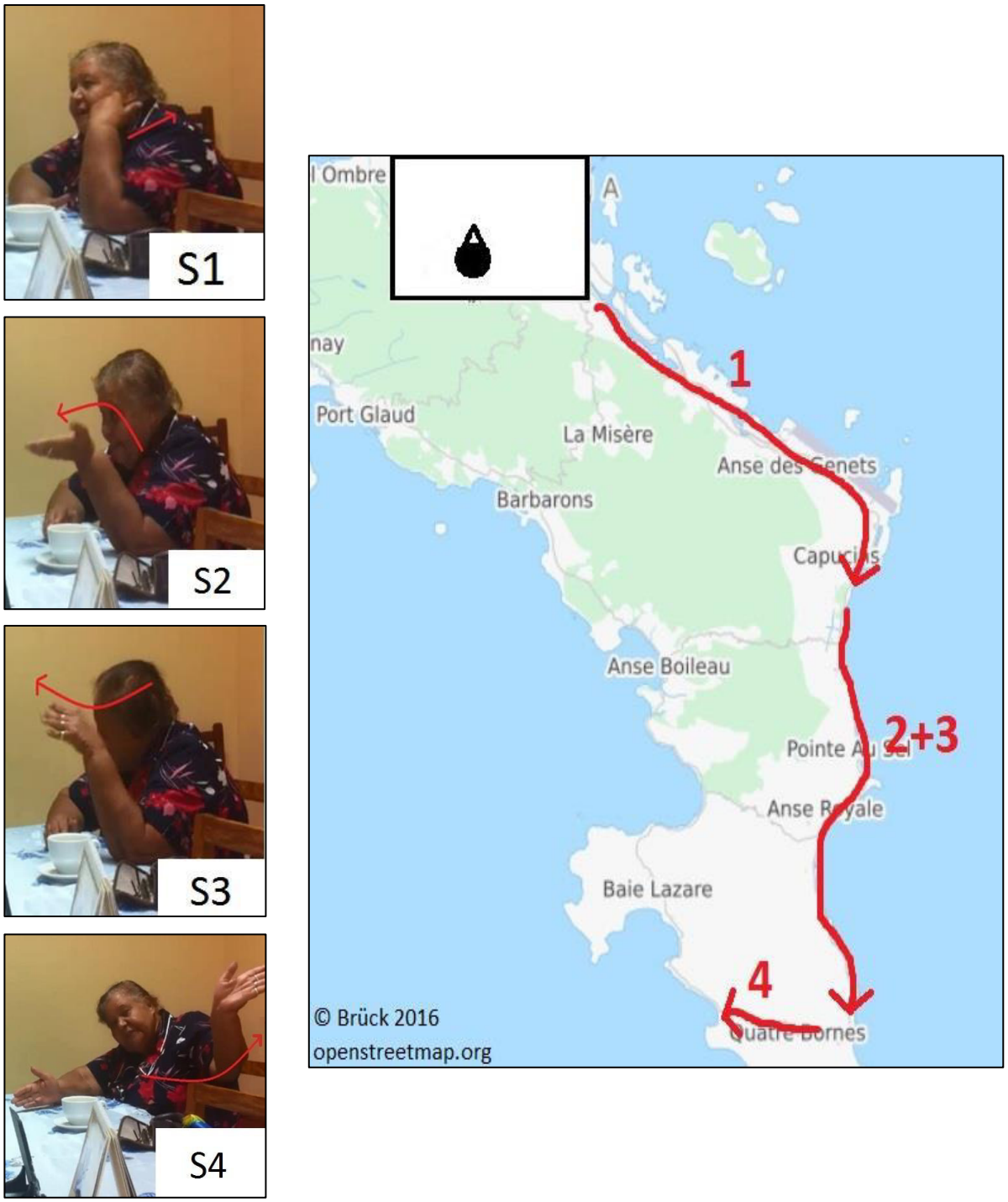


Figure 8.19: Path description switching from an absolute (1, 4) to a relative (2, 3) FoR.

Another example of an elicited route description includes relative gestures only, illustrated in (8.14) and Figures 8.20/8.21 below. This example is another description of the route from Victoria to Beau Vallon. The participant ends her description with providing information about how to recognise the relevant bus stop at Beau Vallon and how to get to the beach from there.

(8.14)

	S1	S2
	**	********

Zis en pti pe par devan ou aret la, ou debarke. Then ou kapab vwar lo lans.

Just ART little bit on front 2SG stop DEM, 2SG get off. Then 2SG able see on beach.

'Just a little bit more ahead you stop and you get off. Then you can see the beach.'

S1: Art-rh, hs-B-bent, P-TD, mov-arced, qu-L, pos++2

S2: Art-lh, hs-5-lax, P-TD, mov-arced, qu-L, pos4.

This information is accompanied by two gestures (Figure 8.20), both of which are produced according to the relative FoR. As Figure 8.21 shows, the gestures are not instances of direct pointing, since the vectors projected from the articulators do not indicate the actual position of the locations referred to. Rather, the participant expresses a transposed view, in which she takes the traveller's point of view into account. Thus, the speaker applies a relative FoR in both speech and gesture.

Figure 8.20: Gestures referring to two locations in the relative FoR.

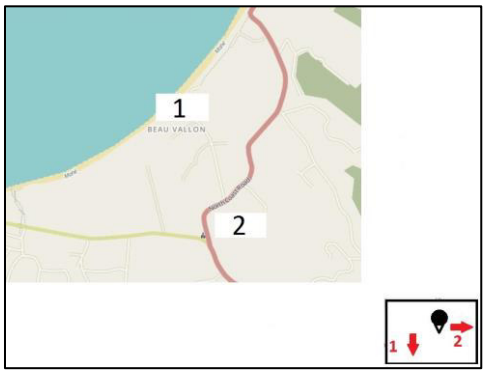


Figure 8.21: Position of the participant in relation to the two locations referred to by her gestures.

While spontaneous, locally-anchored narrations tend to apply an absolute FoR in the gestural domain, participants seemed to be more flexible in the use of FoRs during the elicited route descriptions. A very different distribution of FoRs can be found in the descriptions produced during the Man and Tree Space Game (Levinson et al. 1992). On the vocal channel, it is again the relative FoR that is being produced, as examples (8.15) and (8.16) below illustrate. In opposition to spatial reference, these descriptions are accompanied by co-speech gestures which also apply the relative FoR (Figures 8.22 – 8.25). As described in Table 8.1 above, there is no veracity of deictic gestures. Furthermore, a variation of handshapes and movement types is used, since again both iconic and deictic gestures are used here. In opposition to the gestures referring to existing locations on the Seychelles, those produced in the space game are mainly produced in the central areas and usually of medium or small quality.

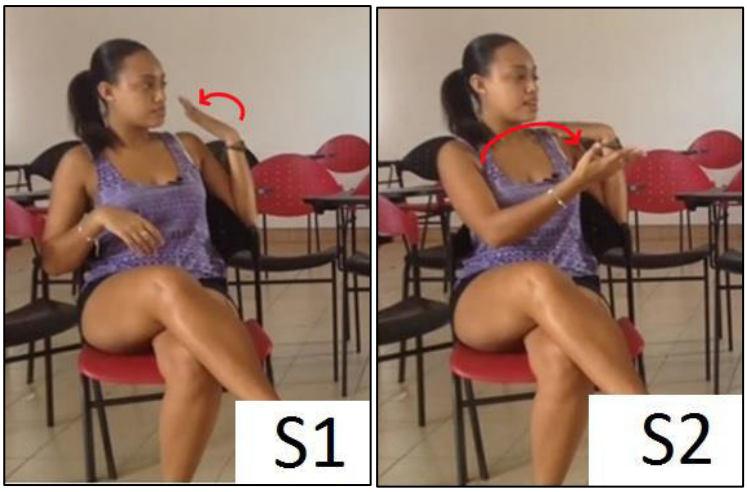


Figure 8.22: Gestures produced during a description of a stimulus from the Man and Tree Space Game (Brück 2016).

(8.15) (Brück 2016)

	S1				S2	
	*********				*****	
Enn pe	vir	anfas	ek	nou, enn pe	vir	par deryer.
One ASP	orient	opposite with	1PL,	one ASP	orient to	back.

'One is oriented towards us, one is oriented to the back.'

S1: Art-lh, hs-B-open, P-TD, mov-bendp, qu-S, pos3
S2: Art-rh, hs-B-open, P-TU, mov-arced, qu-M, pos+1

The picture described by the participant displays two figures whose orientation is marked in Figure 8.23 below. The left picture illustrates the orientation of the two figures in relation to the participant

when she memorised the picture. The right picture then shows the speaker orientation during the description for which she rotated by 180°, and the figure orientations represented by her gestures.

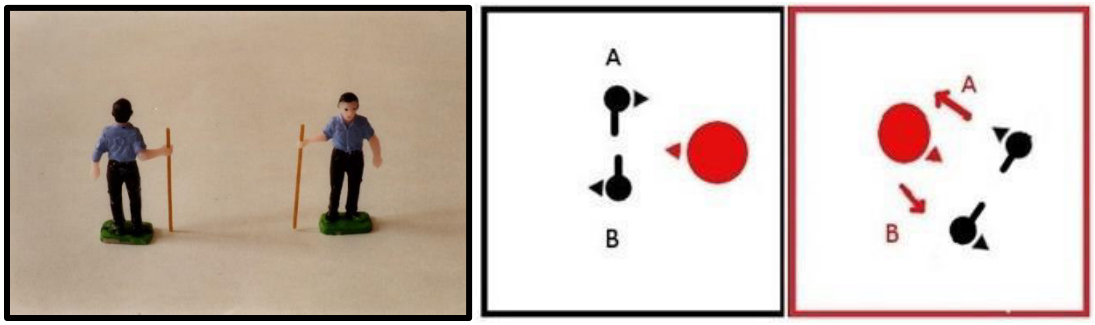


Figure 8.23: Stimulus picture (left), orientation of figures (A, B) and speaker before the description (middle) and orientation of speaker and representation of figure orientation during the description (right) (Brück 2016).

As this example shows, the participant takes her own orientation into account when describing the stimuli picture. She explicitly mentions this perspective by describing one figure as being oriented towards the viewer of the picture (*anfas ek nou*) and the other as looking to the 'back' (*par deryer*). Furthermore, as Figures 8.22 and 8.23 illustrate, her gestures produce the exact same image. The first co-occurs with the utterance *anfas ek nou* and involves movement towards the speaker, while the second stroke is produced simultaneously with *par deryer* and involves movement away from the speaker. These two gestures thus do not represent the actual orientation of the figures when she looked at them (Figure 8.23, middle), but the corresponding shift together with the speaker's rotation (Figure 8.23, right), which is typically the case in a relative FoR.

A similar case is displayed in Figures 8.24 – 8.25 and example (8.16) below. Again, the speaker produces two gestures, but this time only refers to one figure. She describes the orientation of the figure according to her perspective, *mon kote gos*, with the first gesture pointing towards her left shoulder. When the interlocutor could not find the corresponding picture, she repeated this utterance, this time stressing her viewpoint by producing a gesture touching her left upper chest when saying *lo mon kote gos*, 'on my left side'.

Figure 8.24: Gestures produced during a description of a stimulus from the Man and Tree Space Game.

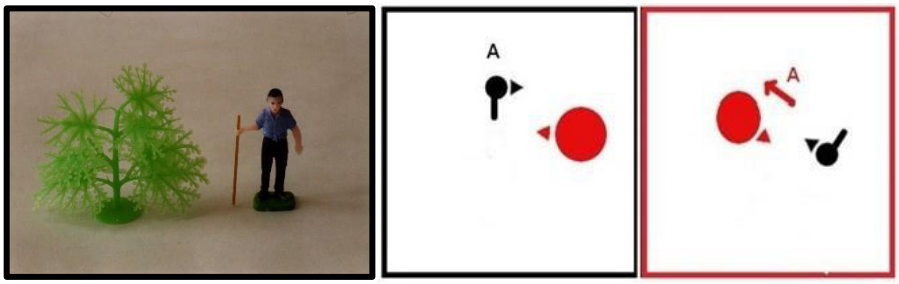


Figure 8.25: Stimulus picture(left), orientation of figure (A) and speaker before the description (middle) and orientation of speaker and representation of figure orientation during the description (right).

(8.16)

I pe debout ek son baton. Son baton i lo kote i lo mon kote gos.

3SG ASP stand with POSS stick. POSS stick PAR on side 3SG on POSS side left.

S1 S2
*** ****

(…) Son baton pe lo mon kote gos.

POSS stick ASP on POSS side left.

'He stands with his stick. His stick is on my left side. […] His stick is on my left side.'

S1: Art-lh, hs-A, P-TD, mov-straight, qu-M, pos3

S2: Art-lh, hs-5, P-TD, mov-straight, qu-S, pos0

There was only one case in which a participant described a stimulus according to absolute features. She told her interlocutor that one figure was looking towards the sea whereas the other was looking towards the mountains. Her gestures supported this description, with one gesture pointing behind her back, i.e. towards the sea, and another directed towards her front, i.e. in the direction of the

mountains. This incident, however, was clearly a case of mockery, since the participant exhibited a certain competitiveness to win the card game. Furthermore, the interlocutor had problems finding the correct corresponding picture, indicating that such a use of the absolute FoR is not commonly used in everyday interaction.

In sum, while spatial reference in speech is predominantly expressed using the relative FoR, the KS gesture system exhibits a number of characteristics of an absolute FoR (Table 8.2). In everyday communicative interaction, such as in the locally-anchored narrations, pointing tasks and route descriptions, some features listed by Levinson (2003) have been found. A majority of gestures associated with spatial reference were produced in extended gesture space (see Chapter 7.3.1), and pointing was not necessarily accompanied by body torque or eye gaze. Furthermore, a certain veracity of path segments and overall maps could be found to some extent. Gestures often followed natural lines and showed a similar distribution of handshapes to what Levinson (2003) proposed. Finally, spontaneous gestures often constituted a fusion of deictic and iconic elements. However, some of the absolute features listed in Levinson (2003) cannot be attested for the KS gesture system. First, the tendency to use the right hand as a dominant articulator has been described in the previous chapter. Second, no gestures expressing complex vectors could be observed. Finally, as will be discussed in detail in the following subsection, metaphorical pointing does occur frequently. Furthermore, as Table 8.1 above, examples (8.15) and (8.16) and their corresponding figures illustrate, co-speech gestures also expressed the relative FoR, especially in the elicitation task. Thus, the KS spatial reference system can be described as using a mixed FoR, combining both relative and absolute features in everyday interaction (see Table 8.2 below).

Table 8.2: Distribution of FoRs according to modality.

Frame of Reference	**Modality**
Relative	Speech and Gesture
Absolute	Gesture

8.3.3 Multimodal expression of distance

In KS, proximity can be expressed by demonstratives and adverbs (see Chapter 7.2). In the demonstrative system, distal locations are referred to by *laba*, whereas for proximal locations, *isi* and *la* are used. This twofold distinction is complemented by the adverbs *akote*/*o bor*, *pre,* and *lwen*, which convey a more detailed differentiation. However, while the demonstratives express proximity and distance in relation to the speaker, the four adverbs can be used in relation to the speaker (8.17a) or in relation to another ground object (8.17b).

(8.17)

a) Mon telefonn i akote mwan. (proximity to speaker)
POSS telephone PAR next 1SG.
'My telephone is next to me.'

b) Bibliotek i akote bistop. (proximity to ground object)
Library PAR next bus stop.
'The library is next to the bus stop.'

While (8.17a) implies proximity to the speaker, (8.17b) does not provide any information about the distance between speaker and figure, since the latter is located according to another ground object. Thus, regardless of the position of the speaker, i.e. near to the library or far from it, the utterance would remain the same. This means that KS adverbs of spatial reference can imply both near, intermediate, and far distance in relation to the speaker, because they express distance in relation to a ground object rather than in relation to the speaker.

Gestures produced in combination with such references may indicate differences in distance by means of their position in gesture space. As has been illustrated in Figures 8.14 – 8.16, above, a list of spatial references with increasing distance from the speaker can be accompanied by gestures produced in increasingly high gesture space as well. Following natural lines[96], the nearer locations are expressed by lower gestures, while locations which are further away are referred to by higher gestures. However, this tendency was only observed when spatial references were produced in relation to each other. On the level of spatial reference unconnected to another referent, the twofold distinction between near and far found in the demonstrative system is paralleled by gesture position to some extent. The upper third of extended gesture space is associated with [-near] locations, with no distinction between intermediate and far. In contrast, locations that are marked with [+near] are mainly produced in the lower third of extended gesture space or in the two central areas. The intermediate third of extended gesture space is used to refer to both proximal and distant referents.

This distinction is illustrated by example (8.18) and Figure 8.26 as well as example (8.19) and Figure 8.27 below. Furthermore, it has to be taken into account that the notions of 'near' and 'far' may differ not only across speakers, but also across contexts. As a consequence, both gestures and speech in the KS system are rather flexible with regard to this matter.

[96] As described in Chapter 3.5, Levinson (2003) lists several characteristics of gestures produced according to an absolute FoR.

Figure 8.26: Use of extended gesture space to refer to a location (star) far from the speaker (circle).

(8.18)

	S1	S2
	*********	****
Li	en pti pe lo bor (…)	lo bor (…) erport.
3SG ART	little bit on side	on side airport.

'Her house is a little bit nearer to the airport.'

S1: Art-rh, hs-5lax, P-AB, mov-bendbf, qu-S, pos4

S2: Art-rh, hs-5lax, P-AB, mov-straight, qu-L, pos4

In this example, the participant refers to a friend's residence, which is located near the airport. As the map in Figure 8.26 shows, this location is not part of the immediate surroundings of the communicative interaction. This distance is reflected in her gestures, which are produced in the upper third of the peripheral gesture space.

In contrast, the gestures produced in the example below refer to the actual location at which the conversation is taking place. The participant explains that on certain occasions, all her children will come to this exact place. This notion of vicinity is expressed by her gesture, which is produced in a low position in central gesture space.

Figure 8.27: Use of central gesture space to refer to a location near to the speaker.

(8.19)

S1
****

Tou-le-zan nou fer en lannen tou tou piti i vin kot mwan.

Every year 1PL make ART year all all small PLP come at POSS.

'Every year we celebrate New Year's Eve, all my children come to my place.'

S1: Art-lh/rh, hs- 5, P-TD, mov-arced, qu-M, pos+2

8.3.4 KS gesture families of spatial reference

Considering both form features of spatially referential gestures and their temporal, semantic, and semiotic relation to speech, four gesture families of KS spatial reference can be discerned (Table 8.3). The two flat handshapes, *B* and *5*, and their variations concerning openness and laxness can be considered to fall into one common gesture family. In KS, these gestures are produced mainly in the extended gesture space, i.e. in the periphery and the extreme periphery, with the subgroup of *5* and *5-open* also occurring in gesture space at the side or towards the back of the gesturer. The main referential function of this family is to convey information about vectors, general directions and an unspecified number of locations in a similar area (see examples (8.11/12) and Figures 8.11/12). Most importantly, locations or directions referred to by this gesture family are most commonly located beyond the immediate surroundings and thus associated with intermediate and far distance.

Another KS gesture family is characterised by the extension of the index finger, with variants of different degrees of vagueness and an optional extension of the thumb. This family is produced in both peripheral and central areas of gesture space and is used to refer to, or to specify, individual locations rather than vectors (see example (8.10) and Figure 8.10). The locations referred to by this

family can be located in the immediate surroundings or also further away. The third gesture family is characterised by the extension or bending of all fingers to the front, resulting in a *claw* handshape. Similar to the *IX* gesture family, *claw* gestures can be found in both central and peripheral areas of gesture space. In opposition to the two previous gesture families, the *claw* family is not necessarily involved in direct pointing to existing places. It is rather spatial reference to areas, often also involving generalisation or a certain abstraction, which is accompanied by these gestures. This is illustrated by (8.20) and Figure 8.28 below. Here, the participant speaks about the efforts of reclaiming land from the sea and compares this to the situation in the past. She refers to Mahé in general as a 'plot of land', which at that time did not have any parts that had been reclaimed from the sea.

Figure 8.28: Claw gesture accompanying an abstract spatial reference

(8.20)

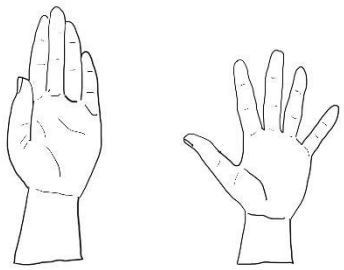
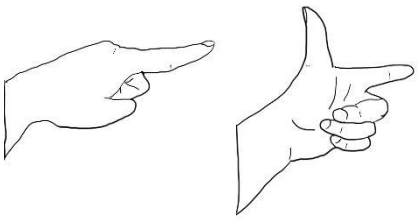
			S1	
			*****	
Nou ti	annan zis	nou later	li	menm.
1PL TNS	have only	POSS land	3SG	REFL.

'We only had our plot of land.'

S1: Art-rh/lh, hs-claw(rh)/5(lh, P-TC, mov-straight, qu-M, pos+3(rh)/+4(lh)

Finally, the last gesture family is characterised by the *A-open* handshape with an extended thumb. It is used for direct pointing towards locations that are at the back of the gesturer. As a consequence, this gesture family is almost exclusively produced in peripheral areas and frequently also in extreme gesture space at the side or the back of the gesturer (see Figure 8.17 and example (8.13)). Furthermore, this gesture can also be metaphorically extended to referents that are very far away. For example, one participant asked the interviewer when she would travel back to Europe and produced a large *A-open* gesture to the side, stressing the distance between Mahé and Europe.

Table 8.3: Gesture families in KS spatial reference.

Gesture Family	Description
	**Features** • flat handshape • extended gesture space **Referential functions** • vectors and directions • individual locations [-near] • unspecified group of locations [-near]
	**Features** • extended index finger • central and peripheral gesture space **Referential functions** • individual locations [+ near], [-near] • specification
	**Features** • bent fingers / fingers extended towards the front • central and peripheral gesture space **Referential functions** • generalised spatial reference • abstraction of locations
	**Features** • extended thumb • peripheral gesture space **Referential functions** • locations located at the back of the gesturer • locations in a very distance

8.4 MULTIMODAL PERSON REFERENCE

8.4.1 Preferences for initial person reference and FoRs

Similar to spatial reference, the KS system of person reference is guided by various strategies and involves both the vocal and the gestural modality. As has been described in Chapter 2.5, person reference has been shown to be a dynamic process that is shaped by the interaction and/or competition of certain preferences: recognition, minimisation[97], association, and circumspection (Enfield and Stivers 2007; Levinson 2007; Sacks and Schegloff 2007).

In the present corpus, KS speakers predominantly chose nominal constructions for first reference to individuals, sometimes also including a possessive pronoun. If this referential form was not enough for the interlocutor to successfully identify the referent, a description was added. Only in a few cases a name was mentioned as the only referential form. Rather, names were often added after a successful introduction by a nominal construction, as an additional piece of information to be used later in subsequent references. Example (8.21) below illustrates this choice of individual reference forms of initial reference to persons in KS.

(8.21)

a) Li i ti fer **en msye**, **en msye anvil**, **msye I.B**. pour ekri let demann.
3SG 3SG ASP make ART man, ART man town, Mr. I.B. for write letter ask.
'He had a man, a man from town, Mr. I.B. write the wedding letter.'[98]

b) **Mon tantin**, **ki reste obor mwan**, **M.** la, i fer en Christmas breakfast.
POSS aunt, REL stay next 1SG, M. DEM 3SG make ART Christmas breakfast.
'My aunt, who lives next to me, M., she makes a Christmas breakfast.'

However, it has to be taken into account that if a referent is well known to both conversation partners, initial reference may also involve a name only. This is illustrated by (8.22) below.

[97] This section will concern pragmatic minimisation only. As mentioned in Chapter 7.2, the case of bare nouns is an instance of morphosyntactic minimisation, which can be counterbalanced by contextual information (K. Brandt, p.c.).

[98] The *let demann*, i.e. wedding letters, were traditionally a part of the preparations of a wedding. Unfortunately, this tradition is not actively performed very often nowadays. For further information, I would like to refer the interested reader to the research Cindy Mokka has conducted at the Lenstiti Kreol Enternasyonal.

(8.22)

Apre mwan mon pass lanmwatye dan lakour, lanmwatye mon al kot **C**.
After 1SG 1SG spend part in home, part 1SG go at C.
'Then I spend part of the day at home and the other day I go to **C.'s** place.'

In general, however, KS speakers tend towards producing two reference forms for initial person reference, the choice of which is structured according to the following hierarchy:

(8.23)

NP/Possessive > Description > Name

Thus, for initial person reference in KS, the preference for recognition, alongside with the preference for association, seems to play a stronger role than the preference for minimisation. This is displayed in Figure 8.29 below:

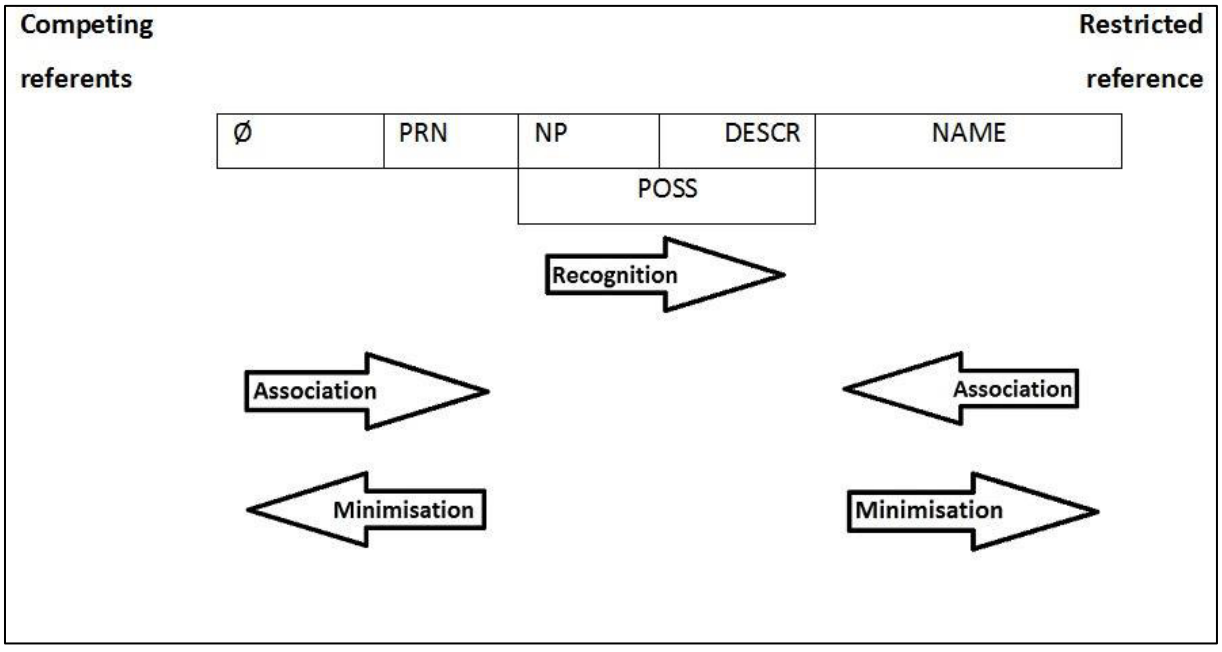


Figure 8.29: Preferences active in KS person reference (based on Levinson 2007:34 ff.).

As Figure 8.29 illustrates, the preference for recognition causes a tendency towards the use of nominal constructions, descriptions and, ultimately, names rather than pronouns or null subjects to be used in initial person reference. Furthermore, as illustrated by the examples above, this preference can also be seen as the reason for the juxtaposition of several reference forms. The preference for association is of medium importance in the KS reference system and can be used to enhance recognition by the

use of possessives in nominal constructions[99]. In the corpus, an association was most often connected to the speaker herself. However, a secondary association with one of the interlocutors was also expressed in several instances, each time associated with an interactive gesture:

Figure 8.30: Interactive gesture (S3) expressing an association of the referent with the interlocutor.

(8.24)

S1	S2	S3
**	***	***

La, mon lot vwazen ki'n mor, msye D., en ler i ti la.

DEM POSS other neighbour REL ASP die, Mr. D., ART time 3SG TNS DEM.

'There, my other neighbour who has died, Mr. D., was here at times.'

S1: Art-lh, hs-K, P-TD, mov-straight, qu-S, pos++2

S2: Art-lh, hs-IX, P-TC, mov-bend1, qu-S, pos++2

S3: Art-lh, hs-B-open, P-TC, mov-straight, qu-S, pos+3

In this example, the speaker first produces two gestures directly pointing at the location of the former neighbour's residence. However, the third gesture, which is produced synchronously with the utterance of his name, is directed towards her interlocutor. This gesture can be analysed as an interactive gesture, expressing the association of the neighbour not only with the speaker but also with the interlocutor, since the interlocutor not only lives in the same area but also had mentioned this exact neighbour in the previous discourse segment.

[99] It should be taken into account that locally-anchored narrations about the role of family and neighbourhood may trigger an increased use of reference forms expressing association. However, this tendency was also observed in narrations about a flood that occurred some years ago and in discussions about the moral values of the younger generation.

The preference for minimisation, comes into action when the referent is well known to both interlocutors, such as in example (8.22), when a name was used without any further information. In very extreme cases, a zero reference form occurs as a result of the preference for minimisation. However, as will be discussed below and in Chapter 9, this is only the case if the referent is a) in subject position, and b) being maintained or re-introduced in the discourse. As such, the occurrence of null subjects is not a matter of initial person reference, but rather a matter of discourse salience. Finally, there was no evidence that the preference for circumspection played any role in the locally-anchored narrations analysed for this study. The reduction of reference forms in initial person reference described above seems to be triggered by the preference for minimisation rather than a societal preference for circumspection. The only context in which circumspection seems to play a role is when interlocutors speak about another person without wanting him or her to notice it. However, a predominant role of circumspection attested for initial person reference as in e.g. Bininj Gunwok (Garde 2013) or Yélî Dnye (Levinson 2007), cannot be assumed for KS. In sum, in everyday communication, recognition and association seem to be the driving forces of initial person reference in KS, with the preference of minimisation playing a minor, and the preference for circumspection a negligent role.

8.4.2 Gestures and ambivalence in speech

As discourse unfolds, the ranking of preferences becomes more complex, revealing a certain ambivalence in KS person reference[100]. On the one hand, a certain reduction of reference form occurs, since pronouns are the predominant form of reference for maintained references, as it is commonly expected to be the case across languages (see Chapter 2.3.2). In KS this not only concerns the preference for pronouns over nominal constructions, but also the occurrence of null subjects, which are a possible form of maintained reference if the subject is highly salient. An example for this reference form from the corpus is listed below.

(8.25)

Mon troun lo lili, enn kote lipye dan lakok. Prezan **Ø** sey kriye.
1SG return on bed, one side foot in bandage. Then Ø try shout.
'I went back to the bed with one leg in bandages. Then I tried to shout for help.'

[100] Originally, the four preferences have been proposed to guide initial person reference only (see various contributions in Enfield and Stiever's (2007) edited volume). However, as the following section demonstrates, traces of these preferences can also be found in subsequent mentions.

On the other hand, however, references to individuals or groups often involve reduplication and repetition of pronouns. A very common form of reduplication in the case of self-reference is illustrated in (8.26a) below. This type of reduplication occurs very frequently in the corpus and always involves at least one independent and one subject pronoun. However, reduplication of pronouns may also occur in reference to other persons, as (8.26b) illustrates.

(8.26)

a) **Mwan, mwan mon** rapel mon laz.
1SG, 1SG 1SG remember POSS age.
'I remember my age'

b) Konmsi **nou, nou tou nou** preske la.
Like 1PL, 1PL all 1PL almost DEM.
'As such we are all here together.'

Furthermore, the repetition of a pronoun at the end of a clause is also possible:

(8.27)

Dan lalinn kler **nou** pe zwe kouk **nou**.
In moon clear 1PL ASP play hide 1PL.
'In the moonlight we are playing hide and seek.'

Further ambivalence is found concerning the FoRs of person reference in KS. As described in Chapter 2.5, an absolute FoR is expressed by names, nicknames and non-relational descriptions, whereas a relative FoR is expressed by kin terms and relational descriptions. Since KS employs names and possessive constructions in equal measure, an intermediate position between absolute and relative FoR can be assumed.

In sum, the analysis so far has revealed a certain ambivalence in the KS reference system. On the one hand, references to individuals are reduced and vague, due to a reduced article and pronoun system as well as due to the occurrence of null subjects. On the other hand, pronouns are often reduplicated or repeated at the end of a clause. Since gestures are co-expressive and simultaneous and thus in a close temporal and semantic relation with speech there are two possibilities of how the gestural modality is involved in those two strategies of person reference. First, gestures might be used

to counterbalance reference in speech, i.e. complementing vague or reduced reference with additional information and being reduced themselves when reference is over-explicitly marked in speech. A second possibility is that the information conveyed by gestures parallels the prevailing strategy in speech, i.e. that they remain reduced alongside with speech, and occur additionally when referents are reduplicated or repeated.

Strikingly, neither of the two possibilities could be accounted for. Gesture rates did not increase when reference in speech was vague or reduced, neither did they decrease when referents were reduplicated or repeated (see also Figure 9.14 in the following chapter). Furthermore, whether referents in speech were specific or non-specific did not have an effect on gesture production. Only a tendency towards gesture production alongside individuated referents could be found, but this was only the case for 30% of all person references.

In order to test whether in principle gestures could be used to counterbalance reduced person reference in KS, a comprehension task was conducted. As described in Chapter 6.1, short videos were produced in which ambiguous sentences were uttered. In the first condition, gestures disambiguated speech towards an interpretation of the ambiguous pronoun as the first person mentioned, whereas the second condition included metaphorical pointing indicating the second person mentioned to be the referent of the pronoun. In the third condition, no gestures were produced[101]. Participants were then asked to interpret these videos and choose a referent for the ambiguous pronoun. Example (8.28) is an exemplary sentence used in this task:

(8.28)

Peter ek Zan pe al dan lakour. Toudenkou, i glise e tap son lipye.
Peter and Zan ASP go in home. Suddenly, 3SG trip and hurt POSS leg.
'Peter and John are walking home. Suddenly, he trips and hurts his leg.'

The results of this comprehension task are displayed in Figure 8.31 below. Strikingly, the condition, in which pointing was produced to indicate the initial referent, and the condition without any pointing gestures were interpreted similarly. Only the condition with pointing gestures indicating the subsequent referent elicited a different picture.

[101] See Appendix III for the complete list of stimulus sentences and Chapter 6.1 for a description of the task.

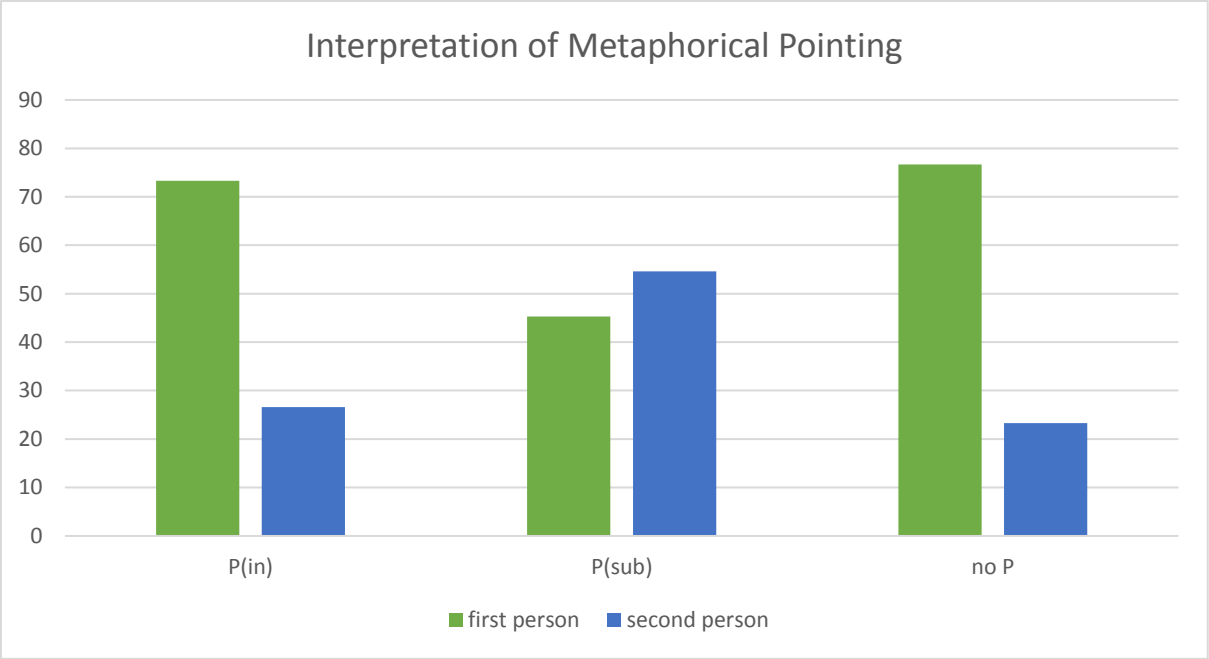


Figure 8.31: Interpretation of metaphorical pointing in the elicitation task. P(in): initial person indicated by the pointing gesture; P(sub): second person indicated by the pointing gesture; no P: condition without any pointing gestures[102].

Two conclusions can be drawn from Figure 8.31. First, the condition in which pointing referred to the first person mentioned, i.e. a 'P(in)' stimulus, and the condition without pointing resulted in the same pattern of interpretation. In both conditions, participants predominantly chose the first person mentioned to be the one to which the pronoun referred. Thus, this interpretation can be assumed to be the default strategy. Second, the condition in which pointing referred to the second person, i.e. a 'P(sub)' stimulus, mentioned delivered mixed results. Importantly, the choice for one or the other interpretation did not only vary between participants but also within individual participants. Thus, a participant often chose to interpret the pronoun as referring to the first person in one P(sub) stimulus, and chose the second person to be the referent in another P(sub) stimulus. This shows that even though the pointing gesture must have had some effect on the participants' choices in this condition, it was not consistently used as a disambiguating factor[103].

This finding contrasts with the high number of metaphorical pointing gestures produced in the locally-anchored narrations. 42% of all deictic gestures referring to individuals were metaphorical

[102] As mentioned in Chapter 6.1, the videos in which gestures were produced included three shapes of pointing. The results, however, indicated that it did not matter to the participants whether a pointing gesture was produced with the *IX* handshape in central gesture space, with the *IX* handshape in peripheral gesture space, or with a combination of *IX* pointing towards the centre and *A-open* pointing towards the back. Thus, a further differentiation of Figure 8.31 and the following interpretation of the results according to handshapes is not necessary.

[103] This stands in contrast to the interpretation of metaphorical pointing in German. In a pilot study conducted by Brück in 2014, 10 adult German speakers used the metaphorical pointing gestures produced with the ambiguous stimulus sentences as a disambiguating factor without hesitation.

pointing gestures. However, a closer analysis reveals that 95% of these pointing gestures convey redundant information and thus do not complement the utterance in speech. These results lead to the conclusion that in KS, metaphorical pointing to individuals is used to support reference conveyed in speech and not to disambiguate referents. This also means in turn that the interpretation of metaphorical pointing in KS does not rely on catchments only but that the presence of additional vocal information is crucial. Finally, if these findings are applied to the ambivalence attested for KS person reference above, two conclusions can be drawn. First, vague or reduced reference as well as reduplication and repetition do not seem to be factors influencing gesture production. Second, abstract pointing gestures are a form of reduplication themselves, since they convey redundant information and can only be interpreted in relation to a reference in speech.

8.4.3 KS gesture families of person reference

As it was the case in spatial reference, certain gesture families can be identified in KS person reference (see Table 8.4). Similar to spatial reference, the *B* and *5* handshape fall into the same gesture family of flat handshape gestures, assuming multiple functions. On the one hand, they refer to groups and individuals and are most often used when gestures support the expression of individuation. On the other hand, these gestures are frequently used interactively, by not only pointing but often also touching interlocutors, and pragmatically, when presenting discourse referents.

Figure 8.32: Use of the flat handshape in person reference.

(8.29)

S1 S2
*** ***

Madanm G. i mon vwazen, ou mon vwazen.

Mrs G. PAR POSS neighbour, 2SG POSS neighbour

'Mrs G. is my neighbour, you are my neighbour.'

S1: Art-rh, hs-5-lax, P-TD, mov-bendp, qu-S, pos+4

S2: Art-rh, hs-5, P-TC, mov-bend5, qu-S, pos+4

As this example shows, the two flat-hand gestures are used to refer to the two interlocutors, i.e. Mrs G. and the interviewer. At the same time, the first gesture involves the touching of the interlocutor's arm, which is an interactive element.

The *IX* family has the main function of deictically referring to individuals and is involved in all three abstractions of deixis, i.e. direct, metonymic, and metaphorical pointing (see examples (8.4)/(8.5) and the corresponding Figures 8.5/8.6). The *purse* handshape, which does not occur in spatial reference, is the one most often used to refer to the self, sometimes also in combination with touching one's chest (example (8.30) and Figure 8.33). Furthermore, this handshape is frequently used to express an opposition between two individuals.

Figure 8.33: Use of the purse handshape for reference to the self.

(8.30)

S1
***

Sanmenm sa ki mon mon dir ou toultan.

DEM DEM REL 1SG 1SG SAY 2SG always.

That's what I tell you all the time.

S1: Art-lh, hs-purse, mov-arced, pos0

Opposition can also be expressed by the *claw* handshape, but this handshape mainly refers to groups rather than to individuals. In (8.31), illustrated by Figure 8.34, the participant uses the *claw* handshape to refer to a community, which is not further specified:

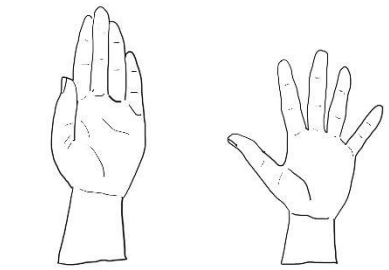
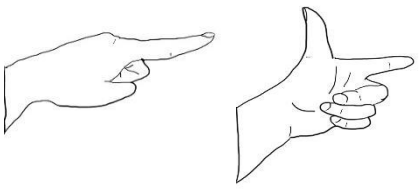
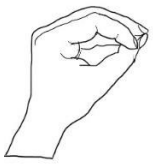
Figure 8.34: Use of the claw handshape in person reference.

(8.31)

S1
****
Selman ler ou konpar Ladig kot ou ti reste dan kominote avek Mae.
But when 2SG compare La Digue at 2SG TNS stay in community with Mahé.
'But when you compare La Digue, where you lived in a community, with Mahé.'

S1: Art-rh/lh, hs-claw, P-TU, mov-arced, qu-S, pos+2/+1

Table 8.4: Gesture families in KS person reference

Gesture Family	Description
	**Features** • flat handshape • central and peripheral gesture space **Referential functions** • presentatives • groups & individuals • interaction • individuation
	**Features** • extended index finger • central and peripheral gesture space **Referential functions** • individuals
	**Features** • all fingers connected • central and peripheral gesture space **Referential functions** • self-reference • individuals in opposition
	**Features** • bent fingers / fingers extended towards the front • central and peripheral gesture space, with a preference for central gesture space **Referential functions** • groups • groups in opposition

Finally, there is one handshape that expresses both spatial and person reference in interaction. The *A-open* handshape is typically produced either with the palm towards up or the palm towards the centre and involves an arced, horizontal movement from the central areas towards the extreme periphery, often ending in extreme gesture space at the side or at the back of the participant. This gesture is usually of large quality and most frequently involved in metonymic pointing. In all of these cases, the pointing gesture referred to a location as a reference point for a target person. Furthermore, it expresses features of an absolute spatial FoR and is an instance of ad hoc reference, using features in the physical context to establish reference to a person. In order to illustrate this use, example (8.13) and its corresponding figure are reproduced here as example (8.32) and Figure 8.35:

Figure 8.35: Interaction of spatial and person reference expressed by the A-open handshape.

(8.32)

	S1
	***
Mon konn	msye D. la borlanmer.
1SG know	Mr. D. DEM beach.

'I know Mr. D. there at the beach.'

S1: Art-lh, hs-A-open, P-TC, mov-arced, qu-M, pos-4

This instant of back pointing, which metonymically combines spatial and person reference, has been observed quite frequently in both private and public settings and can be regarded as a 'typical' KS gesture.

8.5 SUMMARY

This chapter has provided insights into several aspects of multimodal reference in KS. First, it has been shown that gestures and speech are not merely juxtaposed but closely intertwined and construct reference together. As such, the gesture-speech ensemble is characterised by close temporal, semantic and semiotic relations. Second, co-speech gesture interaction in spatial and person reference has been found to be characterised by complexity, with different parts of referential information being represented across the two modalities. Third, this chapter has provided a detailed analysis of strategies to refer to individuals and locations in KS.

In spatial reference, KS gestures were most often found to convey information about the ground as opposed to information about the figure, and the most common combination was an expression of both figure and ground in speech with an additional expression of ground in gesture. Furthermore, four gesture families could be identified, differing in their phonological features and in the kind of information they conveyed, such as individual locations versus vectors, specification versus generalisation, or abstraction. In KS, expression of proximity by adverbs of spatial reference refers to the relationship between a figure and a ground object rather than anchoring it to the speaker. Furthermore, distance is reflected in the gestural domain on the level of gesture height: the higher the gesture produced in gesture space, the further away the location. However, this reflection can be best described as a continuum rather than in the form of fixed categories. Concerning the use of spatial FoRs, a split could be attested between speech and gesture. While in speech the relative FoR was predominantly used, the gestural system displayed some absolute features, such as a veracity of pointing, a typical distribution of handshapes, the lack of eye gaze following a pointing gesture, the lack of body torque, and the merge of iconic and deictic features within one gesture. Other absolute features, however, such as the expression of complex vectors by one gesture and the lack or reduction of metaphorical pointing could not be attested for the KS gesture system. Furthermore, the choice of an absolute FoR has been found to differ across data types. While in spontaneous, locally-anchored narrations and elicited pointing tasks, the absolute FoR was frequently expressed in gestures, elicited route descriptions contained a mix of relative and absolute FoR in gestures. Furthermore, the Man and Tree Space Game elicited relative gestures only. Thus, for KS spatial reference a mixed FoR can be attested[104].

In person reference, a preference for recognition and association was found to take priority over the preferences for minimisation and circumspection. Furthermore, it was shown that the KS person reference system is characterised by a certain ambivalence in speech. On the one hand, there

[104] This mix of FoRs is further analysed in the following chapter by taking into account contextual features as well.

is a certain reduction of information: on a morphosyntactic level, we find a reduced pronoun system and a reduced article system, while on a pragmatic level, null subject pronouns are possible in situations where the referent is highly salient. On the other hand, reference can also be over-explicitly stated, such as in reduplication and repetition of pronominals, as well as the combination of several reference forms in the introduction of referents. Strikingly, however, this ambivalence does not seem to affect gesture production at all. Furthermore, it was found that metaphorical pointing to individuals is produced in spontaneous interactions, but only interpreted if the information is redundant to that conveyed in speech.

In sum, the analysis has shown that the KS reference system is not only multimodal but also displays idiosyncratic patterns. Furthermore, both in person and spatial reference, KS speakers apply a mix of strategies, which are often flexibly applied. This creative and flexible use of several referential strategies is further investigated in the following two chapters. Chapter 9 considers the influence of contextual features on the choice of spatial FoRs and the mixed strategies of person reference. Furthermore, the reflection of information structure on both the vocal and the gestural modality will be described. Chapter 10 then focuses on the communicative ecology in which KS speakers refer to individuals and locations. It is shown that in KS, reference-marking is a tripartite system that can be analysed according to the individual form features (see Chapter 7), according to their mobilisation in situated communicative interaction (this chapter and Chapter 9), and according to their link to the sociohistorical and sociocultural environment (Chapter 10).

9 CONTEXT, INFORMATION STRUCTURE AND REFERENCE-TRACKING

9.1 INTRODUCTION

The previous chapter has demonstrated that KS speakers mobilise both gesture and speech to refer to individuals and locations. Furthermore, this mobilisation underlies several strategies of person and spatial reference, such as the choice of FoRs or the preference for recognition. However, in many instances, KS speakers display a certain flexibility concerning the choice of referential strategies, which suggests that there must be further factors influencing KS multimodal reference.

Such factors are uncovered in the present chapter. Section 9.2 describes the context-dependency of KS speakers' referencing strategies, both in spatial and in person reference. It is shown that the choice of FoRs depends on the context in which KS speakers produce a spatial reference and that different contexts are associated with the presence, or absence, of shared cultural knowledge. Similarly, evidence is presented that context and common ground between the interlocutors shapes the mobilisation of referential expressions in KS person reference. In addition, KS speakers not only make use of contextual information but that they actively create mutually shared information which is then used to further substantiate person and spatial reference, as is illustrated below. The analysis in Section 9.3 focuses on the cross-modal representation of discourse status as well as on several strategies of foregrounding referents. Finally, in Section 9.4 several gestural means of tracking referents throughout discourse are presented.

9.2 CONTEXTUAL FACTORS IN KS MULTIMODAL REFERENCE

9.2.1 Contextual factors in KS spatial reference

As described in Chapter 2.3, contextual information can be categorised according to the types of shared knowledge that are present in a given conversation (see e.g. Givón 1983; Diessel 1999; Auer 2009). First, knowledge can be 'generally shared', resulting for example in general associations with or implications of a linguistic form. Second, knowledge can be 'specifically shared' in relation to a given communicative interaction. This kind of shared knowledge involves information from the linguistic and the extralinguistic context. Furthermore, factors such as the social statuses of the interlocutors may also be important contextual information that is integrated into the creation of reference. Third, the particular interlocutors may also share specific knowledge, for example due to shared experience.

Finally, knowledge can be 'culturally shared' and concern information about the cultural rules of social interaction, about individual social groups, and about cultural domains, such as kinship systems, spatial setups, or medical knowledge.

Since in everyday communicative situations spatial reference is not only multimodal but embedded into a situated and interactive environment, it is shaped by contextual factors and shared knowledge. Thus, generally shared knowledge, i.e. semantic relations, associations and implications connected with a certain reference form, has an influence on the expression of spatial reference in both speech and gesture. For example, *anvil* can be literally translated as 'in the town', but is exclusively used to refer to the capital city Victoria. This convention is further supported by the fact that an utterance including the referent *anvil* is often accompanied by a direct pointing gesture towards the direction of Victoria. Similarly, the motion verb *desann* 'descend' is conventionally used to describe a movement towards Victoria. While it is originally derived from the topological features of the island, with the city centre of Victoria being located in a flat area, it is now also conventionally extended to routes towards the city which do not involve any difference in altitude. To a certain extent, it could also be argued that the four gesture families of KS spatial reference express generally shared knowledge as well (see Chapter 8.3.4). Even though they must be regarded as tendencies rather than as fixed conventions, the occurrence of individual handshapes can be assumed to at least activate certain associations with individual types of spatial reference.

On an interactive level, shared knowledge associated with the particular discourse not only influences the form of referential strategies concerning new or given referents (see Section 9.3 below), but is also a key feature of the many ad hoc references to locations in the extralinguistic environment. As was described in Chapter 8, direct pointing and metonymic pointing are common tools to establish reference and often crucial for the interpretation of a reference form in speech, such as demonstratives. Furthermore, iconic gestures that model spatial referents not only refer but also create visual information that is part of the extralinguistic context. Moreover, specific knowledge shared by the interlocutors due to shared experience can be used to refer to locations as the following example illustrates:

(9.1)

Kot **E.** (…) ti antre dan lakaz partou.
At E. TNS enter in house everywhere.
'At **E.**'s house [the water] entered the house everywhere.'

In this utterance, the participant activates specific knowledge shared by the interlocutors to refer to a location. She acknowledges the fact that all conversation participants share knowledge about the

person referred to as *E.,* which she then uses as a reference point to express information about a location, namely E.'s house. As such, specifically shared knowledge is used metonymically to refer to a location.

The influence of shared cultural knowledge is most apparent on the level of spatial FoRs. As has been described in Chapter 8.3, KS speakers seem to mix a relative and an absolute FoR, with the absolute FoR being predominantly expressed in the gestural modality. However, the analysis also shows that for example in the Man and Tree Space Game participants expressed the spatial relations with a relative FoR in both gesture and speech. A closer look at the contextual factors associated with the individual methods of data collection reveals that it is the availability of shared cultural knowledge that seems to guide the choice for one or the other FoR. As already discussed in Brück (in press), the major difference between the Man and Tree Space Game on the one hand and the pointing tasks, route descriptions and locally-anchored narrations on the other hand is that the former involves abstract and unanchored spatial information, whereas the latter three are grounded in existing space. In other words, shared cultural knowledge about the geographical setup is available in those contexts with a mixed FoR, i.e. absolute in gesture and relative in speech, whereas it is absent in contexts with a relative FoR (see Table 9.1).

Table 9.1: Distribution of FoRs according to context (Adapted from Brück (in press)).

Context	**Availability of Shared Cultural Knowledge**	**Overall Frame of Reference**
Locally-anchored narrations	yes	absolute-relative
Pointing tasks	yes	absolute-relative
Route descriptions	yes	absolute-relative
Space game	no	relative

In the context of locally-anchored narrations, pointing tasks and route descriptions, KS speakers employ a mix of FoRs, with the absolute FoR being almost exclusively represented in the gestural domain. In the vocal domain, KS speakers tended to use the relative FoR instead. However, as Chapter 8.3.2 has illustrated, gestures sometimes also express a relative FoR in these contexts. This suggests that KS speakers flexibly switch between FoRs not only across but also within the two modalities. The context of the Man and Tree Space Game, in contrast, caused speakers to employ a relative FoR only, both in gesture and in speech. This context is characterised by an absence of shared cultural knowledge, since here the speakers did not refer to existing spatial setups in the geographical environment of Mahé, but to abstract spatial setups on stimulus pictures. Thus, the availability of

shared cultural knowledge can be identified as one factor contributing to the choice for an absolute FoR in KS.

9.2.2 Contextual factors in KS person reference

Similar to spatial reference, KS person reference is also shaped according to contextual features. Shared knowledge about the social statuses of the interlocutors was usually conveyed by the forms of address the individual participants used for each other. In communicative interactions between participants who knew each other very well and who considered themselves to be on an equal hierarchical level, nearly no names but rather the pronoun *ou* was used to address each other. However, in conversations in which the participants wanted to express respect and/or the fact that one of them was considered to be in a higher hierarchical position, names were used frequently as a form of address[105]. This is illustrated by the short excerpts in example (9.2) below. In (9.2a), the two participants considered each other good friends, whereas in (9.2b), the participants are work colleagues. While G. has been an established colleague for a long time, H. just recently joined the team.

(9.2a)

F: Se sa mon pe dir ou. Konmsi kot mon ti ete avan Ladig i pa parey ditou.
PRES DEM 1SG ASP say 2SG. Like at 1SG TNS been before La Digue PAR NEG same at all.
'That's what I'm telling you. Like where I was before at La Digue, it is not the same at all.'

S: Egzakteman. Selman ler ou konpar Ladig kot ou ti reste dan kominote avek Mae,
Exactly. But time 2SG compare La Digue at 2SG TNS stay in community with Mahé
mon asire ou lafanmir konmsi zot in deza al vizite Mae konmsi. Zot pa'n vwar okenn
1SG sure POSS family like 3PL ASP already go visit Mahé like. 3PL NEG-ASP see any
similarity?
similarite?
'Exactly. But when you compare La Digue, where you have lived in a community with Mahé, I am sure that your family has already visited you on Mahé. Didn't they see any similarities?'

[105] I would like to thank Cindy Mokka for drawing my attention to this distinction.

F: Wi me mon mon kapab koz kot mon sorti, me isi ler mon'n vin isi i en
Yes but 1SG 1SG able speak at 1SG leave, but DEM time 1SG-ASP come DEM PAR ART

landrwa etranze.
place foreign.
'Yes but, I, I am able to talk about where I come from, but when I arrived here it was a foreign place.'

I pa parey. Be ou ki manyer pour ou?
PAR NEG same. But 2SG how for 2SG?
'It is not the same. But how is it for you?'

(9.2b)

H: Be konmela dimoun pa marye pou fer maryaz tradisyonnel, **madanm G.** en?
But now person NEG marry for make wedding traditional, Mrs. G., right?
'But nowadays people do not have a traditional wedding, Mrs G., right?'

G: Selman zot ankor parey, parey desanm mon ti al maryaz mon kouzin.
Sometimes 3SG still like, like December 1SG TNS go wedding POSS cousin.
'Sometimes they do still exist, for example in December I went to my cousin's wedding.'

G describes the wedding

H: I rar.
PAR rare.
'It is rare'

G: Me selman laplipar lazenes ki pe marye konmela,
But majority youth REL ASP marry now,

zot pe marye modern akoz zot in fini antre dan sa monn modern.
3PL ASP marry modern because 3PL ASP finish enter in DEM world modern.
'But the majority of the young people who are getting married today,they are having a modern wedding, because they are part of the modern world now.'

H: Selman enn ant, **madanm G**., ou ankor zwenn konfitir papay tournen ladan.
Sometimes one between, Mrs G., 2SG still find konfitir papay tournen inside.
'It is just in one of many marriages, Mrs G., where you will still find konfitir papay tournen [special jam made for wedding ceremony].'

G: Apre sa zafer**, H.,** dir mwan, si i ankor annan konmsi sa zafer konmsi minwi fodre ale.
After DEM thing, H., say 1SG, if PAR still have like DEM thing like midnight need go.
'After this part, H., tell me if there is still the tradition to leave at midnight.'

The two examples illustrate the overall tendency of F. and S. to use pronouns only to address each other, whereas H. mentions G.'s names more often. Furthermore, while G. is addressed with the combination of *Madanm* and her first name, she addresses her new colleague with her first name only.

Specifically shared knowledge of the particular discourse influences person reference as well. As has been described above, subject pronouns can be left out if they are highly salient to all the interlocutors. Similarly, the use of pronouns for one and the same referent may be variable as well and only be correctly interpreted if the discourse topic is taken into account. In (9.3), the speaker describes the solidarity amongst neighbours in the past. She uses three different strategies to refer to this group: a minimal description indicating third person plural, a first person plural pronoun indicating a certain inclusion of herself in that group, and a second person singular pronoun indicating a transposition and inclusion of the addressee. This shift of perspectives to refer to the same referent can only be correctly interpreted if the linguistic context of the discourse is taken into account.

(9.3)

Vwazen, vwazen lontan ti konsernen avek kanmarad. **Nou** ti pre. **Ou** ti partaze.
Neighbour, neighbour past TNS concern with REC. 1PL TNS close. 2SG TNS share.
'(The) neighbours, (the) neighbours in the past took care of each other. We were close. You shared.'

Finally, pronouns may also be used even after the referent has not been mentioned for a certain time, i.e. in a case of re-introduction. Again, the correct resolution of such anaphoric expressions is only possible if the overall linguistic context is taken into account. In (9.4), the participant speaks about the general atmosphere amongst neighbours nowadays. After describing the predominant attitudes, she uses the pronoun *zot* to refer to the neighbours nowadays in general.

(9.4)

Nepli annan konfyans. Akoz ler ou gete pe in sanze. Bokou siperstisye, move lespri.
NEG have trust. Because time 2SG see little ASP change. Much superstition, evil spirit.
'There is no trust anymore. Because when you look at it, only little has changed. [There is] a lot of superstition [and] evil thoughts.'

Prezan, **zot** pa fye kanmarad.
Now, 3PL NEG trust REC.
'Now, they do not trust each other.'

Not only linguistic, but also extralinguistic context of the speech situation is frequently taken into account in KS person reference. As was mentioned in Chapter 8.4.2, 42% of all pointing gestures conveying information about a person are metaphorical. In turn, this means that nearly 60% of such gestures are directed directly towards the referent or towards a location associated with the referent. This high amount of ad hoc ascriptions of referents onto targets or reference points in the immediate surrounding supports person reference conveyed in speech. This is illustrated by (9.1), which is here reproduced as (9.5) and Figure 9.1.

Figure 9.1: Metonymic back pointing.

(9.5)

S1
***
Kot E. (…) ti antre dan lakaz partou.
At E. TNS enter in house everywhere.
'At E.'s house [the water] entered the house everywhere.'

S1: Art-rh, hs-A-open, P-TC, mov-straight, qu-M, pos+3

In this example, the participant refers to one of her colleagues who had been affected by a flood a few years ago. In this case, we find two levels of metonymy, one in speech and one in gesture. First, in speech, *E*. is used as a reference point, since the actual target referent is E.'s residence. Second, in gesture, the participant points towards the direction of E.'s office to refer to E. as a person. Thus, while in speech the participant metonymically uses a person to refer to a location, in gesture she uses a location to refer to a person.

Example (9.6) and Figure 9.2 illustrate one of many frequently occurring instances of direct pointing to an interlocutor, in this case R.

Figure 9.2: Direct pointing to a conversation partner.

(9.6)

S1
***
R. osi laba i bezwen gete son msye i annan lenz prob.
R. too DEM PAR need see POSS husband PAR have clothes clean.
'R. here as well has to make sure that her husband has clean clothes.'

S1: Art-lh/rh, hs-5 (lh)/5lax (rh), P-AB (lh)/P-TD (rh), mov-arced, qu-L, pos4

As in this example, usually these direct pointing gestures are produced in addition to a name and sometimes even in addition to a demonstrative. Thus, this can be seen as another instance of reduplication of person reference. This is also linked to the tendency of participants to involve reference to interlocutors in their locally-anchored narrations in order to clarify statements by giving a concrete, situated example, either in the form of direct speech (example (9.7) and Figure 9.3) or by using the interlocutors as protagonists (example (9.8) and Figure 9.4).

Figure 9.3: Metaphorical pointing to protagonists.

(9.7)

S1 S2
*** ****

Si son vwazen i malad i prevwar. Mon al regard entel, entel i

If POSS neighbour PAR ill 3SG foresee. 1SG go see such-and-such, such-and-such PAR

malad. Mon al vwar li.

sick. 1SG go see 3SG.

'If his/her neighbour is sick, he/her will make sure. I go and see after such-and-such, such-and-such is sick. I will go and see after him/her.'

S1: Art-lh, hs-purse, P-TD, mov-bendp, qu-S, pos+1

S2: Art-lh, hs-5, P-TU, mov-arced, qu-M, pos+2

In this example, the participant speaks about a hypothetical neighbourhood in order to illustrate the solidarity among the neighbours in the past. There are two person references here, one person who falls sick, and one person who decides to take care of her. In the first sentence, the participant refers to the sick person as *son vwazen*, 'her neighbour', whereas she refers the caring person by a 3rd person singular pronoun. In the next sentence, the viewpoint is shifted from a narration of this scene to direct

speech associated with the caring person. This use of direct speech makes the abstract, hypothetical referents more concrete.

Another strategy to relate abstract referents to the concrete communicative situation is to assign them to the interlocutors, as illustrated by the example below:

Figure 9.4: Situated gestures in person reference. S1 (left): metaphorical pointing, S2 (middle): direct pointing/touching of interlocutor, S3 (right): direct pointing towards interviewer.

(9.8)

	S1	S2
	*******	***
Parey mwan mon annan	mon vwazen.	Madanm G. i mon vwazen,
Like 1SG 1SG have	POSS neighbour. Mrs G.	PAR POSS neighbour,

S3
***
ou mon vwazen. Nou donn ou konman en kado en pti bout.
2SG POSS neighbour. 1PL give 2SG like ART gift ART little piece.
'Like I have my neighbour[s]. Mrs G. is my neighbour, you are my neighbour. We give you a little piece as a gift.'

S1: Art-rh, hs-5, P-AB, mov-arced, qu-M, pos+4
S2: Art-rh, hs-5-lax, P-TD, mov-bendp, qu-S, pos+4
S2: Art-rh, hs-5, P-TC, mov-bend5, qu-S, pos+4

Similar to the utterance in (9.7), this participant uses a concrete example to illustrate the solidarity between neighbours in the past by impersonating a hypothetical neighbour. Instead of using direct speech, however, she assigns the reference to two additional neighbours onto her two interlocutors, i.e. Mrs G. and the interviewer. This is expressed by the use of a name and a 2nd person singular pronoun, but also by her gestures. While in S1, she produces a metaphorical flat-hand pointing to refer to the hypothetical neighbours, S2 touches the interlocutor as the impersonation is uttered (*Madanm*

G.). Similarly, her third gesture is directed towards the interviewer in similar circumstances. With this ad hoc creation of person reference, the participant produced visual information in the extralinguistic context that she then used to describe a hypothetical interpersonal relation.

Specifically shared knowledge of the particular conversation participants is also expressed across modalities. As already illustrated in example (8.24) and Figure 8.30, here reproduced as (9.9) and Figure 9.5, interactive pointing gestures can be used to refer to specific knowledge of the interlocutor concerning his or her association with a referent.

Figure 9.5: Interactive gesture (S3) expressing an association of the referent with the interlocutor.

(9.9)

S1	S2	S3
**	***	***

La, mon lot vwazen ki'n mor, msye D., en ler i ti la.

DEM POSS other neighbour REL-ASP die, Mr. D., ART time 3SG TNS DEM.

'There, my other neighbour who has died, Mr. D., was here at times.'

S1: Art-lh, hs-K, P-TD, mov-straight, qu-S, pos++2

S2: Art-lh, hs-IX, P-TC, mov-bend1, qu-S, pos++2

S3: Art-lh, hs-B-open, P-TC, mov-straight, qu-S, pos+3

Here, the participant uses a gesture (S3) not only to indicate a metonymic relation between the referent, Mr. D., and her interlocutor, but also to express the shared knowledge about the referent. Similarly, the use of names without any introducing nominal descriptionalso indicates specifically shared knowledge of the conversation partners.

Furthermore, some metonymic pointing gestures can only be interpreted correctly, if both conversation participants share specific knowledge about the environment. For example, one spontaneous conversation observed at Au Cap discussed a fictional discourse referent, in this case a young boy. One of the speakers frequently produced large pointing gestures outside of the window when referring to this boy. This gesture could only be interpreted correctly because both interlocutors shared the specific knowledge about a school yard which was located in the direction to which the pointing gesture referred. Thus, this gesture linked a fictional discourse referent with a location generally associated with such a referent.

Finally, shared cultural knowledge about individuals and their position within a societal network is mainly conveyed by speech. Even though this was not explicitly present in the locally-anchored narrations, many participants who took part in the sociocultural interviews pointed to the fact that kinship, especially conveyed by family names, is still an important factor in localising individuals within the society. Finally, there is a so-called 'handkerchief code', which was used in everyday life in the past, but unfortunately is only present in cultural performances nowadays[106]. This code, which consists of different configurations and the position of a handkerchief in the hands or somewhere else on the body, conveys information about the marital status and attitude of participants during courtship.

9.2.3 Interim summary

This section has shown that contextual factors influence both spatial and person reference in KS. The mix of spatial FoRs, which was described in Chapter 8.3.2, can be directly linked to the availability or absence of shared cultural knowledge in the conversation context. Since the 'absolute' gestures produced in locally-anchored narrations expressed some, but not all of Levinson's (2003) criteria, and since this context also involved instances of a relative FoR being expressed in the gestural domain, it can be attested that KS speakers apply a mix of FoRs on three levels: (1) the distribution of FoRs across modalities, (2) the mix of FoRs in the gestural domain, and (3) the distribution of FoRs according to context.

In person reference, contextual factors guide the use of names according to the social statuses of the interlocutors. Furthermore, it was shown that reference forms can be reduced and multiple viewpoints can be applied if the referent can be interpreted according to the linguistic context. Also, KS speakers frequently create ad hoc references in the extralinguistic context, which they then use to

[106] Information about the handkerchief code was kindly provided by the *National Archives* and the *National Museum of the Seychelles*. A photo documentation is part of the exhibition at the Lenstiti Kreol Enternasyonal.

express information about abstract referents. These strategies include for example the impersonating of abstract referents by the speaker, the use of direct speech, and the assignment of referents to interlocutors.

As such, contextual features such as generally shared knowledge, the immediate linguistic and extralinguistic context of the communicative interaction, as well as shared cultural knowledge. They play an important role in KS multimodal reference to individuals and locations. Furthermore, this context is not only used as a resource of information, but also actively produced in communicative interaction.

9.3 The Role of Information Structure in KS Multimodal Reference

9.3.1 The expression of givenness across modalities

The choice of referential forms and strategies in communicative interactions not only depends on the availability of extralinguistic context but also on the position of the referent within discourse (Givón 1983). There are three different states of referential givenness. Referents can be either newly introduced, maintained, or re-introduced. The analysis of the individual discourse statuses is based on the definitions in Chapter 2.3 and follows Gullberg's (2006) annotation scheme: a referent was coded as 'introduced' if it was the first mention of this referent, while it was coded as 'maintained' if it occurred again in the subsequent clause in subject position. In those cases where a referent was mentioned in a subsequent clause in a non-subject position, or in a later clause, the referent was coded as 're-introduced'. Since definite and indefinite nominals may in principle occur in both introduced and maintained discourse statuses, and since in KS definiteness is only marginally encoded by articles[107], the current analysis focuses on the following reference forms: nominal constructions, i.e. (in)definite nominals, descriptions, possessive constructions, demonstratives, pronouns, and names. Figures 9.6 – 9.8 below illustrate the distribution of reference forms according to reference type and discourse status.

[107] See Chapter 7.2.

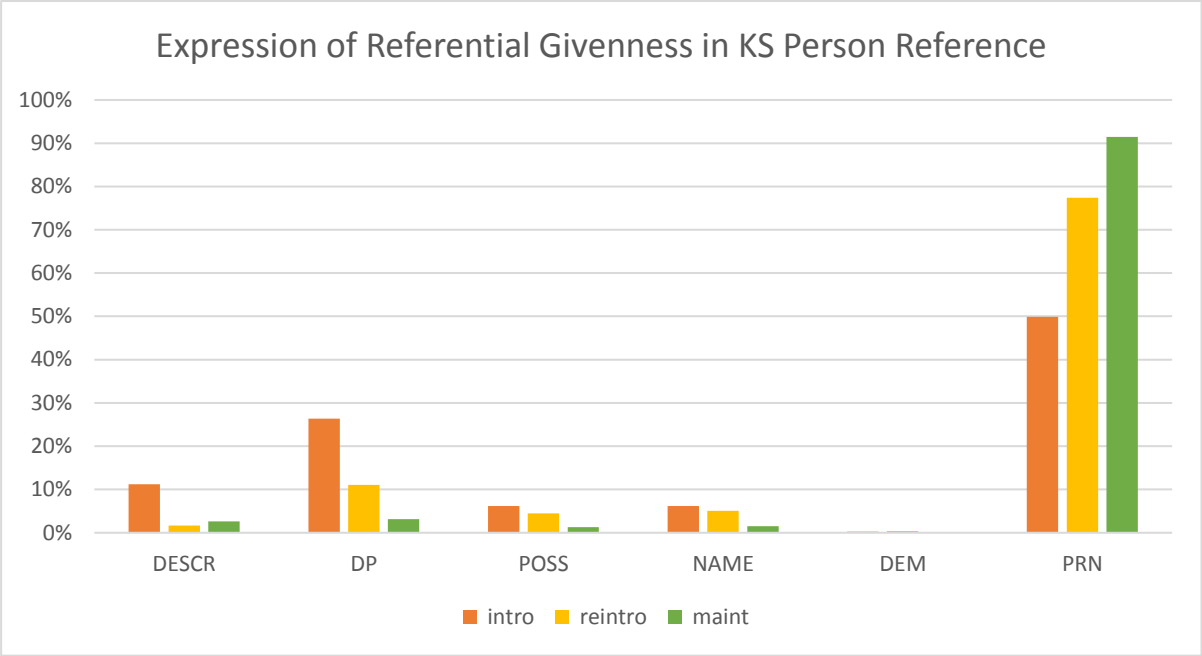


Figure 9.6: Expression of referential givenness in KS Person reference. Intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

As already mentioned in Chapter 7.2.6, the striking majority of all KS person references is provided by pronouns. As a consequence, as Figure 9.6 shows, pronouns constitute the most frequent group of reference types in all three discourse statuses. However, pronouns being used to introduce a referent were almost always either first or second person singular nouns, thus introducing a person that was a discourse participant at the same time. Only in one case a non-present discourse referent was introduced by a third person plural pronoun, which almost immediately elicited the question "Who is *zot*?" from an interlocutor. Interestingly, pronominal reference was also quite frequent for reintroduced referents and not only for maintained referents. In order to illustrate the distribution of other reference forms more visibly, Figure 9.7 below lists all reference forms aside from pronouns according to their discourse status. The second most common form of introducing a referent was a nominal construction in the form of either a bare NP or a DP including *en* or *sa*, followed by descriptions. Possessives usually occurred in combination with nominal constructions and, as it was the case with names, in 6% of the introduction of referents.

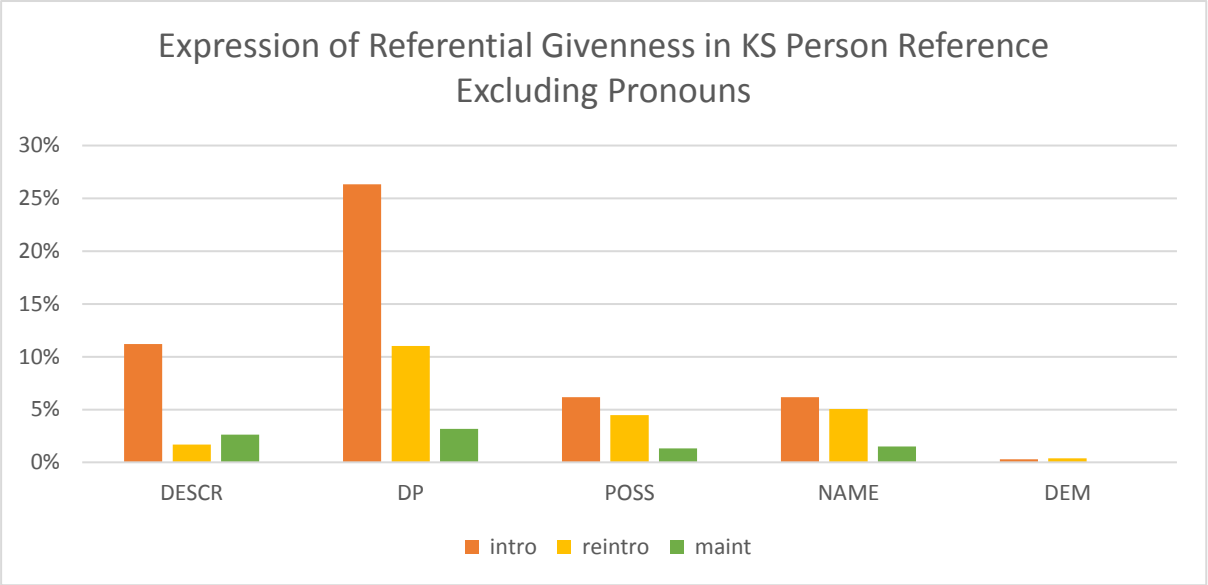


Figure 9.7: Expression of referential givennes in KS person reference excluding pronouns. Intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

In spatial reference, the distribution of reference forms is different, as Figure 9.8 displays. Pronouns are only of high frequency in the case of referent maintenance, and the most frequent means of introducing or reintroducing a referent are toponyms. Demonstratives are used in all three discourse statuses, however most frequently in reintroduction. Nominal constructions, especially descriptions, are not as frequent as the former reference forms, except for the introduction of a referent. Finally, possessives are very rarely used, and if they occur, it is in discourse-new referents only.

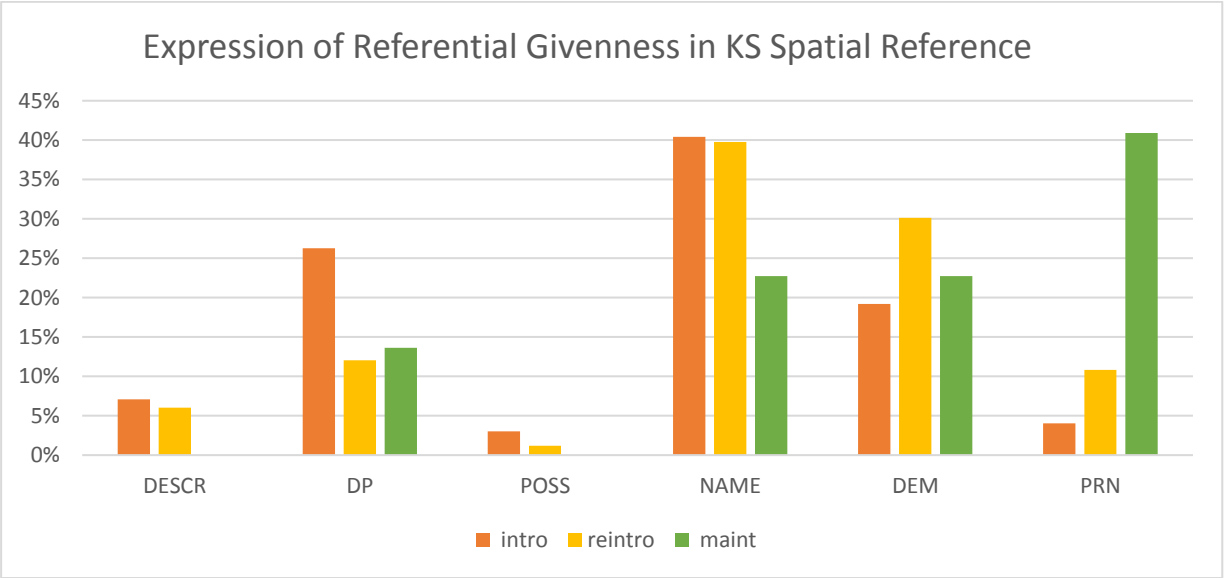


Figure 9.8: Expression of referential givenness in KS spatial reference. Intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

The distribution of gestures in KS according to discourse status follows the findings of Levy and McNeill (1992), McNeill (1992) and McNeill, Cassell and Levy (1993). In total, over 60% of all newly introduced referents were accompanied by gestures. In the case of referents being reintroduced in speech, 40% were accompanied by gestures. Finally, gestures occurred only in 25% of all maintained referents. Moreover, the additional use of gestural marking of discourse status was different in person reference as opposed to spatial reference, as Table 9.2 shows. The split between introduction and maintenance of reference is much more pronounced for gestures accompanying spatial reference than for gestures accompanying person reference.

Table 9.2: Percentage of discourse statuses accompanied by gesture for person and spatial reference.

	Person reference	**Spatial reference**
introduction	44%	65%
reintroduction	33%	31%
maintenance	23%	4%

A more detailed analysis of the gestures produced in different positions in discourse reveals that overall, deictic gestures occur more often. Figure 9.9 illustrates the distribution of deictic and iconic gestures according to referential givenness in KS:

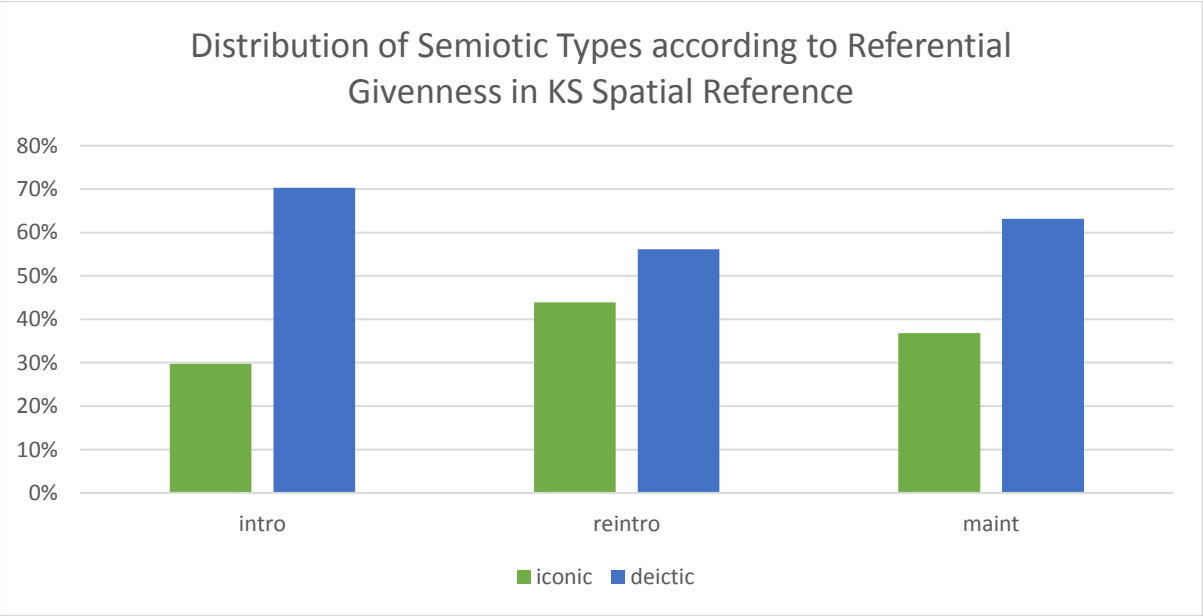


Figure 9.9: Distribution of semiotic types according to referential givenness in KS spatial reference. Intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

As the figure shows, there is a slight increase of iconic gestures associated with reintroduced and maintained referents compared to their number in initial reference to locations. Overall, however, deictic gestures prevail. A similar distribution can be found in gestures associated with person reference, displayed in Figure 9.10 below. Strikingly, the discrepancy between the number of iconic gestures and deictic gestures produced in initial person reference is higher for person reference than for spatial reference.

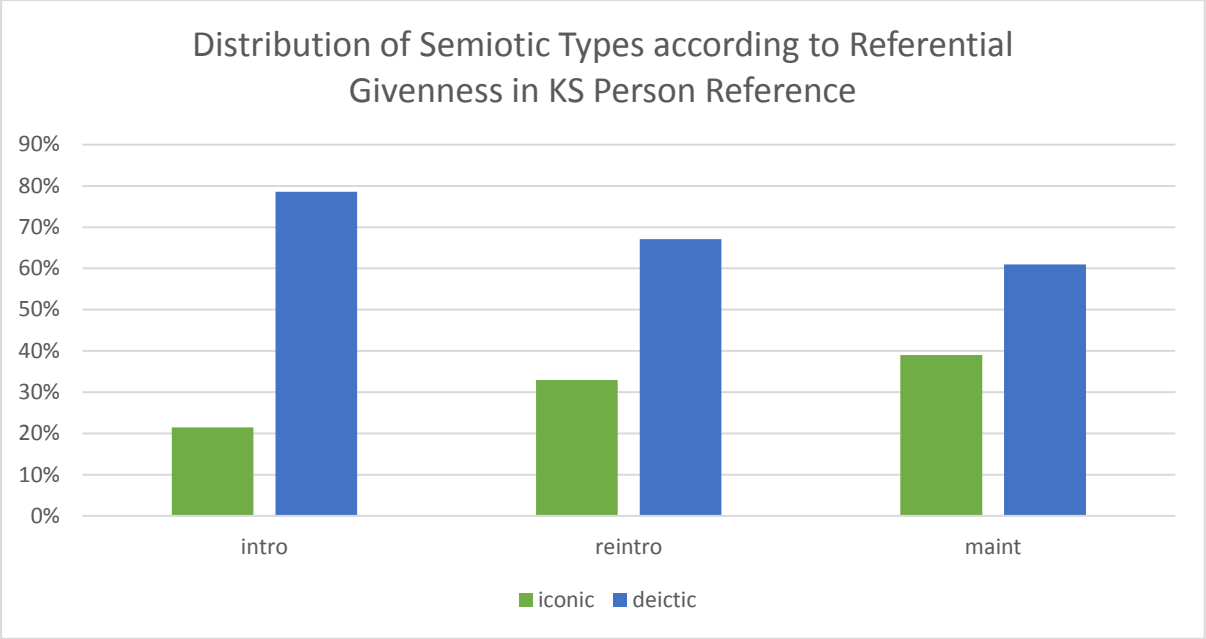


Figure 9.10: Distribution of semiotic types according to referential givenness in KS person reference. Intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

In sum, even though KS speakers produce less gestures in reintroduced and maintained reference, the number of iconic gestures slightly increases with discourse statuses that express common ground. However, overall, deictic gestures still prevail in all types of discourse status.

The semantic relations of gestures with speech, i.e. whether gestures conveyed redundant or complementary information about a referent, is influenced by discourse status as well, however only in spatial reference (Figure 9.11):

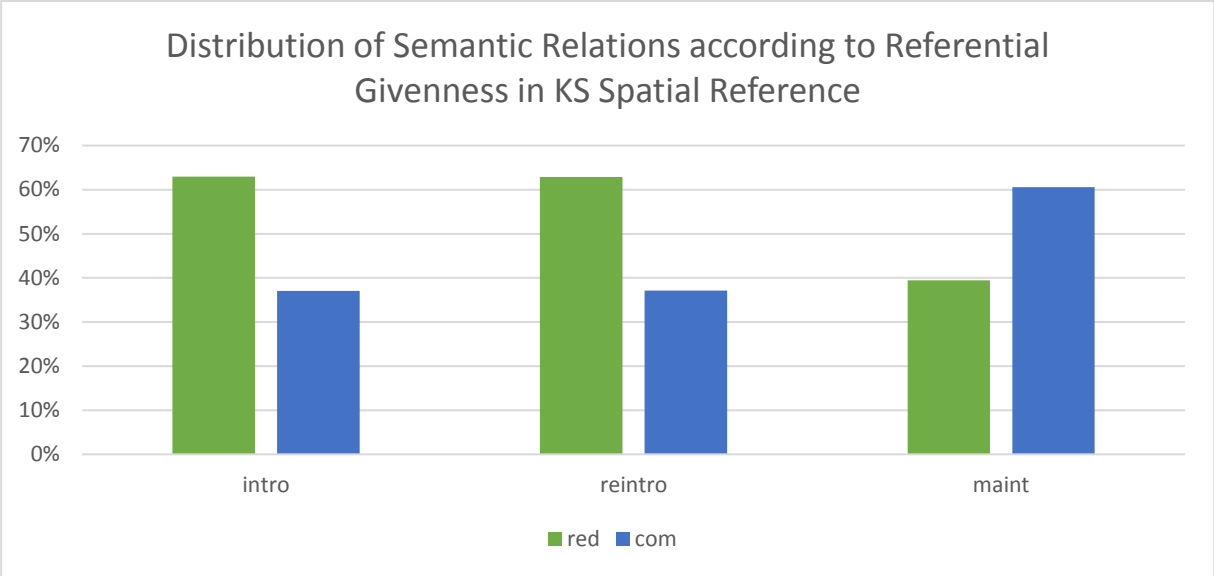


Figure 9.11: Distribution of semantic relations according to referential givenness in KS spatial reference. Red: redundant gestures; comp: complementary gestures; intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

In KS spatial reference, introduced and reintroduced referents are more likely to be accompanied by redundant gestures, whereas maintained referents are more likely to be accompanied by complementary gestures. This distribution, however, could not be found in KS person reference, as Figure 9.12 shows. In person reference, all three discourse statuses are equally likely to be accompanied by redundant gestures.

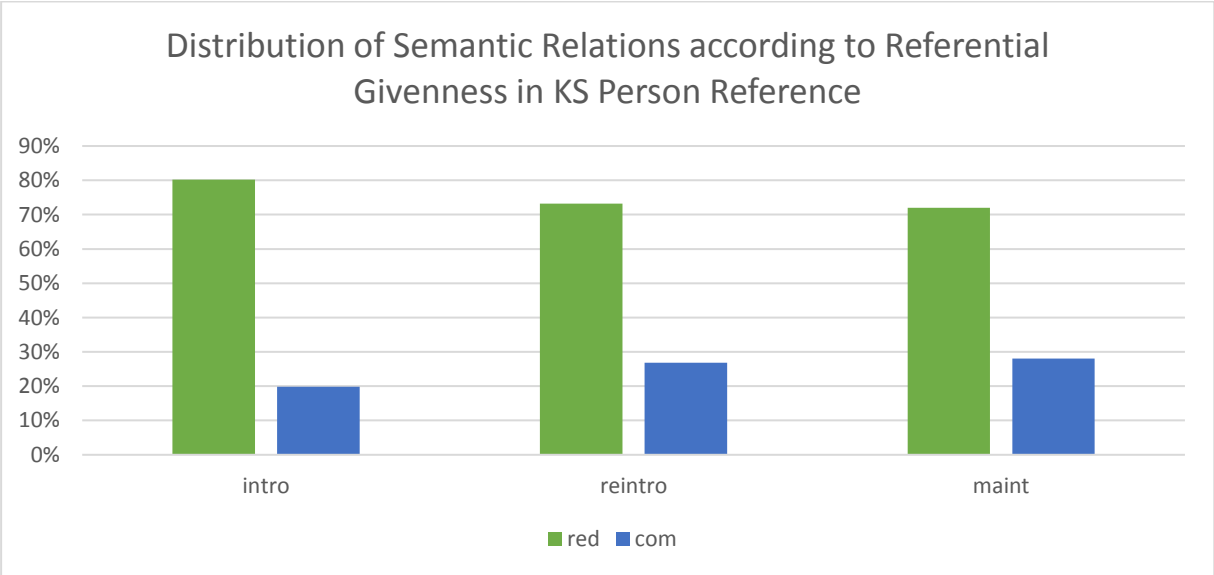


Figure 9.12: Distribution of semantic relations according to referential givenness in KS person reference. Red: redundant gestures; comp: complementary gestures; intro: introduction of a referent, reintro: reintroduction of a referent; maint: maintenance of a referent.

In sum, KS speakers use more linguistic information, i.e. NPs and descriptions, and more gestures for the introduction of new referents than for maintained referents. These results are in line with a number of similar studies (Givón 1983; Levy and McNeill 1992; McNeill 1992; McNeill, Cassell and Levy 1993). A closer look at the characteristics of the gestures produced reveals that overall, deictic gestures are more common in all discourse statuses than iconic gestures, with the number of the latter increasing only slightly after a referent has been introduced. Furthermore, the semantic relation between gesture and speech changes according to discourse status. In spatial reference, the KS patterns follow the findings reported by Foraker (2011), i.e. new referents are more likely to be accompanied by redundant gestures, whereas known referents are more often accompanied by complementary gestures. Strikingly, however, this is not the case for KS person reference. Here, redundant gestures are more often used in all three discourse statuses.

The sensitivity to discourse status is not only restricted to gesture rate and semantic and semiotic relations, but also affects the handshapes of KS gestures. In both person and spatial reference, the *B* handshape most frequently occurred with introductions, whereas the *IX* handshape was more frequent when a referent was reintroduced. The *5* and *purse* handshape occurred equally often in introduction and reintroduction, whereas the *claw* handshape was equally distributed across all three discourse statuses. Thus, a tendency towards the association of certain reference forms with individual discourse statuses can be assumed in the KS reference system, concerning both gesture and speech. Following Givón's (1983: 18 f.) distribution of reference forms according to continuity status in discourse, the following generalisation can be made for KS[108]:

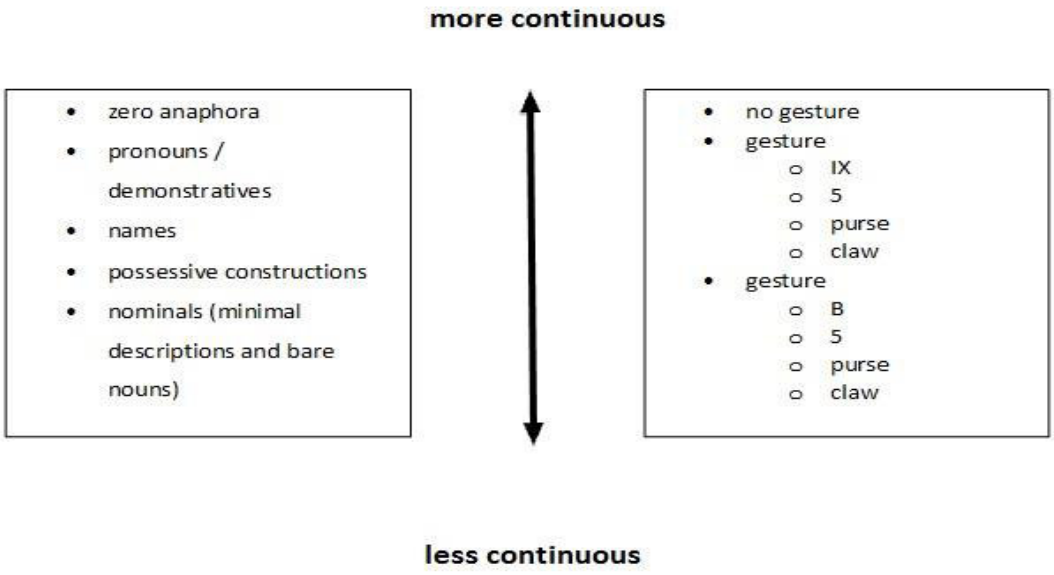


Figure 9.13: Distribution of reference forms and gestures in KS according to discourse status (based on Givón (1983: 18 f.)).

[108] This generalisation only concerns those gestural patterns that were similar in person and spatial reference.

While referential givenness has shown some effect on gesture use in KS, this does not seem to be the case with relational givenness. In the KS corpus, both topic and focus were accompanied by gestures and no form features could be assigned to one or the other. The only differentiating aspect is the tendency of focal reference to be accompanied most often by metaphorical pointing gestures. Gestures accompanying topical reference were more variable, involving direct and metaphorical deixis most often, but also quite frequently metonymic pointing gestures and modelling or metaphorical iconic gestures. In other words, gestures accompanying focal reference are more reduced concerning their semiotic type, but not concerning their frequency, than gestures accompanying topical reference.

9.3.2 Emphasis

In addition to its meaning as a counterpart to the topic of a clause, 'focus' has also been used to refer to a certain emphasis of an element in the sentence from a syntactic point of view (see Chapter 2.3). This often involves a change of the canonical clause structure by means of dislocation of a certain element. In KS we find again a certain ambivalence with regard to emphasis. This means that while there are some operations that indeed constitute a means of emphasis, others seem to be more conventionalised in their use.

One of these apparently emphatic constructions, which however does not convey the notion of emphasis, is the so-called 'sylleptic dual' (Corne 1982: 96). This construction occurs in plural conjunctions, where the pronoun has to be repeated a second time, as illustrated in example (9.10) below. Since the second mention of the pronoun is obligatory in such contexts (Choppy 2013), it is unlikely that this construction is perceived as a marked means of emphasis.

(9.10)

a) **Nou** de Marta, **nou** pou sant en pti sanson.
1PL two Marta, 1PL TNS sing ART little song.
'Marta and I will sing a little song.'

(Choppy 2013: 60; own translation and emphasis)

b) **Nou** de Gabriel, **nou** ava ale.
1PL two Gabriel, 1PL TNS go.
'Gabrielle and I shall go.'

(Corne 1982: 96; own emphasis)

c) **Zot** tou-le-drwa, **zot** ganny kado avek manman.
3PL all-three, 3PL get gift with mother.
'The three of them get a present from their mother.'

(own data)

Another example is the occurrence of so-called 'pleonastic pronouns', or as Corne (1974) calls it, 'the mysterious i', illustrated by (9.11) below.

(9.11)

a) Prezan tou delo **i** refoul kot nou.
Now all water **?** go back at POSS.
'Now all the water goes back to our place.'

b) Mon kapab dir ou mon fiy **i** mon neighbour.
1SG able say 2SG POSS daughter **?** POSS neighbour.
'I can tell you that my daughter is my neighbour.'

At first sight, these constructions seem to involve a dislocation of the topic to the left, followed by a reprise pronoun. However, while in emphatic constructions involving a dislocation the deletion of the pronoun does not affect the grammaticality of a sentence, leaving out the pronoun *i* in the cases mentioned above would leave the sentences ungrammatical:

(9.12)

a) *Prezan tou delo **Ø** refoul kot nou.
* Now all water Ø go back at POSS.

b) *Mon kapab dir ou mon fiy **Ø** mon neighbour.
* 1SG able say 2SG POSS daughter Ø POSS neighbour.

Thus, the KS pronoun *i* can assume more than one function. On the one hand, it is a third person singular pronoun, and on the other hand, it can function as a pleonastic pronoun. Other accounts have

argued that in the latter case, *i* is not a pronoun but rather a dummy TMA marker (Michaelis 1994, 2000), a present tense marker (Bickerton 1989) or an obligatory agreement marker (Bickerton 1993). One important line of argumentation for these interpretations is that *i* does not co-occur with negation (Michaelis 2000) or other TMA markers (Bickerton 1993; Michaelis 2000) if it is used as a particle. However, in the corpus analysed for the current thesis, this was not always the case, as (9.13) illustrates.

(9.13)

Dimoun petet ozordi **i** pa'n vwar ou.
Person maybe today **?** NEG-ASP see 2SG.
'Maybe today the person did not see you.'

In this case, *i* does occur with both the negation marker *pa* and the aspectual marker *in* (abbreviated as '*n*). Thus, it may be the case that in certain contexts, this construction may still be interpreted as an instance of dislocation. Further evidence comes from written sources of the Seychellois variety of English, in which this structure is often literally translated to English, resulting in an emphatic dislocation of a referent to the left followed by a reprise pronoun. Thus, another instance of ambivalence can be attested for KS regarding the use of *i*: besides its function as a third person singular pronoun, in some cases it seems to be interpreted as a reprise of a pronoun after a dislocation of a topic, and in some cases as a dummy TMA marker or singular marker[109].

A clearer case of emphasis is constituted by structural changes of the sentence structure. In KS this can involve topicalisation, focalisation, and clefts (see chapter 2.3). These constructions can be used to foreground either the topic or the focus of a proposition. As described in chapter 2.3, topicalisation does involve the repetition of an anaphoric pronoun (9.14a), whereas focalisation does not (9.14b). In KS, speakers can make use of both strategies.

(9.14)

a) Apre en parey menm **Praslin ek Ladig**, mon osi al **tou**. (topicalisation)
After ART like even Praslin and La Digue, 1SG also go all.
'Then like Praslin and La Digue, I have visited them too.'

[109] A detailed analysis of the exact function of *i* beyond its 3rd person singular use would go beyond the scope of this study. I thus refer the interested reader to the discussions provided by Corne (1974), Bickerton (1989, 1993) and Michaelis (1994, 2000). For the purpose of this study, I will continue to refer to *i* as a particle when its status is unclear.

b) Parey Fregate, nou ti al visit. (focalisation)
Like Fregate 1PL TNS go visit **Ø**.
'Like Fregate, we have gone to visit.'

Another structural means of foregrounding a referent is to use a presentative in the form of a cleft-sentence. According to Bickerton (1993), the use of the presentative *se* in KS is optional, and in fact it has occurred in the present corpus only once. However, the structural features of cleft-constructions, i.e. the occurrence of a relative clause after the subject was quite frequently used. Example (9.15) below illustrates the use of cleft sentences, with or without a presentative.

(9.15)

a) (Bickerton 1993: 194; own emphasis)
(Se) divan ki ti abat bann fler.
(PRES) wind REL TNS knock.over PL flower.
'**It's** the wind that knocked the flowers down.'

b) Own data
Zot ti konnen poudir napa personn ki'n met sa. **Ø** Manmi ki'n met sa.
3PL TNS know that NEG nobody REL-ASP put DEM. Ø Mom REL-ASP put DEM.
'They knew that it was no other person who put them [i.e. the presents] [there]. **It was** Mom who put them [there].'

In addition to these structural changes, KS also allows for repetition and reduplication of individual referents in order to emphasise them. In the case of dislocation, the topic of a sentence is repeated in the form of a pronoun, usually after a short pause:

(9.16)

a) **Ou lafanmir**, **zot** in deza al vizit Mae?
POSS family 3PL ASP already go visit Mahé
'Your family, have they already visited Mahé?'

b) **Sa de fanmir**, **zot** ti organize.
DEM two family, 3PL TNS organise.
'The two families, they organised [the event].'

Furthermore, as already mentioned above, KS speakers frequently employ reduplication of pronouns, as (9.17) illustrates:

(9.17)

a) Be menm **mwan, mon** reste anler laba.
But even 1SG, 1SG stay up DEM.
'But even I live up there.'

b) **Mwan, mwan mon** rapel mon laz.
1SG, 1SG 1SG remember POSS age.
'I remember my age.'

c) Konmsi **nou, nou tou nou** preske la.
Like 1PL, 1PL all 1PL almost DEM.
'As such we are all here together.'

However, similar to the case of the 'mysterious *i*', it is debatable whether the function of pronoun reduplication is always be guided by emphasis. On the one hand, constructions involving *menm* in the sense of 'even', such as in (9.17a), clearly stress the emphatic function of the reduplication. However, constructions such as in (9.17b) and (9.17c) could also be used as a general means of topic marking, as suggested by Escure (1988)[110].

In addition to reduplication, participants frequently also made use of repetition. This device of emphasis may concern individual pronouns but also larger phrases or even sentence structure:

[110] Since this study focuses on multimodal reference to individuals and locations, it can only provide an overview of KS information structure. A detailed analysis of the case of reduplication would require more data from tasks focusing on the elicitation and interpretation of individual strategies, which goes beyond of the scope of this study.

(9.18)

a) E prezan (.) lasosyete **pa pe ede**. Lekol **pa pe ede**. Dan fanmir tou **pa pe ede.**
And now society NEG ASP help. School NEG ASP help. In family all NEG ASP help.
'And now the society is not helping. The school is not helping. The family is not helping.'

b) Dan lalin kler **nou** pe zwe kouk **nou**.
In moon clear 1PL ASP play hide 1PL.
'In the moonlight we are playing hide and seek.'

c) Mon **let demann** i ankor la **li**.
POSS letter ask PAR still DEM 3SG.
'My wedding letter is still there.'

Both structural and pronominal repetition clearly convey a certain emphasis, especially when taking into account the discourse environment. In (9.18a), the participant argued quite strongly that there is a problem of younger people becoming addicted to drugs and she emphasises that it is not only their own fault, but that in some cases, society and its individual institutions are responsible for this development as well. In (9.18b), another participant described the time when she was a little child and that at some special occasions, even the adults would join their game of hide and seek as well. Finally, a third participant described her wedding, the traditions she followed and the events that were associated with it. When she was asked about the *let demann*, i.e. the traditional wedding letter, she was very surprised. After having described the circumstances of receiving this letter, she stressed that she had kept it until the present (9.18c).

Finally, another means of emphasis is the use of independent pronouns in subject position, such as in (9.19) below, which also includes another instance of repetition:

(9.19)

a) **Mwan** fransman dir ou mon ti zwe kouk **mwan**.
1SG frankly say 2SG 1SG TNS play hide 1SG.
'**I** frankly tell you that I played hide and seek.'

b) **Li i** ti fer en msye, en msye anvil, msye I.B. pou ekri let demann.
3SG 3SG TNS make ART man, ART man town, Mr. I.B. TNS write letter ask.
'**He** had a man, a man from town, Mr. I.B. write the wedding letter.'

In sum, KS displays a multitude of structural means to emphasise referents. While several constructions, such as the sylleptic dual and the 'mysterious *i*' seem to include a repetition of elements, they cannot be considered to be used for emphasis. Despite these two cases, however, KS speakers make use of several different techniques to foreground referents. On the one hand, sentence structure may be changed, as it is the case in topicalisation, focalisation and cleft-constructions. On the other hand, KS speakers repeatedly mention referents, as it is the case in dislocations, pronoun reduplication and repetition. Finally, independent pronouns may occur in subject position, emphasising the respective referent.

These strategies to emphasise referents can also be associated with additional emphasis in the gestural domain. As Figure 9.14 illustrates, dislocations were most often accompanied by co-speech gestures (80%). Strikingly, except for topicalisation, the other strategies were accompanied by gestures in less than 50% of the time. Furthermore, neither a specific handshape nor a tendency towards specific semantic and semiotic relations could be associated with this function.

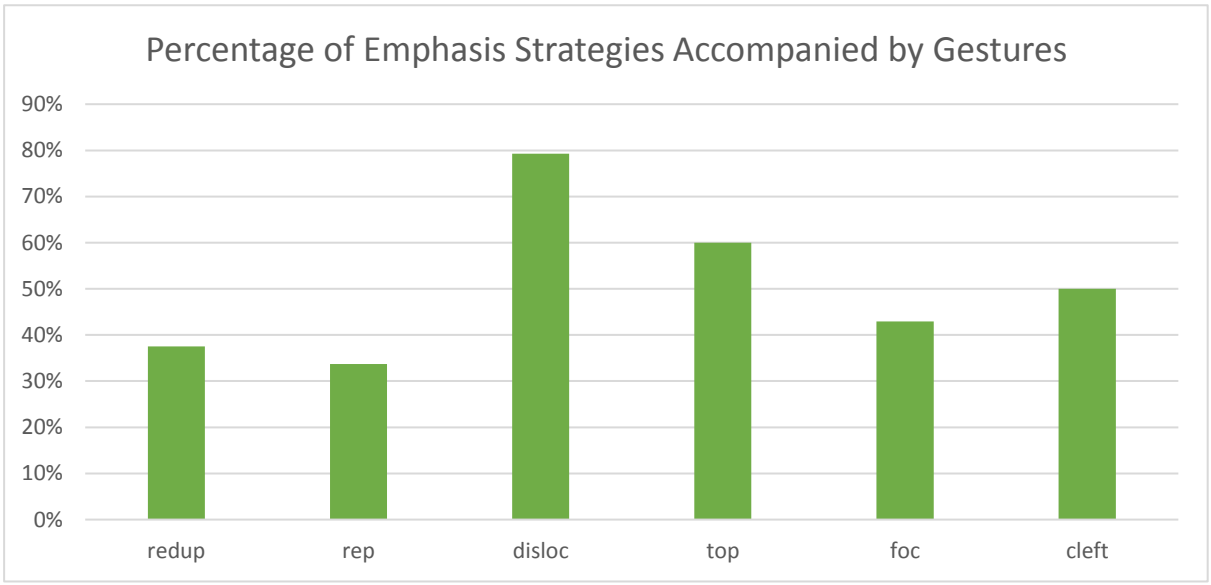


Figure 9.14: Percentage of emphasis strategies accompanied by gestures. Redup: reduplication of pronouns; rep: repetition; disloc: dislocation; top: topicalisation; foc: focalisation; cleft: cleft constructions.

This multitude of strategies to emphasise a referent stands in contrast to the morphosyntactic reduction that is found in the pronoun system and in bare nouns (see Chapter 7.2). These strategies thus may function as a counterbalance to the morphosyntactic reduction and facilitate referent-tracking throughout discourse. The following subsection presents a more detailed analysis of the interplay between gestures and speech in this regard.

9.4 TRACKING REFERENTS THROUGHOUT DISCOURSE

Similar to other languages, KS mainly uses pronouns to track referents across discourse. This is evident from the high number of pronouns associated with maintained referents and further supported by the high number of pronoun repetition and reduplication described in Section 9.3.1 and 9.3.2 above. However, reference tracking is also dependent on contextual features, since the switch of individual viewpoints referring to one and the same referent (see example (9.7) and Figure 9.3) and the occurrence of null subjects (see example 8.25 in the previous chapter) may impede anaphora resolution.

The tracking of referents is not only facilitated by the different means of emphasis described in the previous section, but further supported by gestural features. The use of catchments, i.e. recurrent form features, in order to indicate certain referents that have been previously introduced is quite common. The catchments most predominantly used by KS speakers concern the assignment of individual loci in gesture space to individual referents. This may occur in the form of metaphorical pointing, but also iconic gestures to express an association of further referents with the one initially represented by a specific locus in gesture space. Example (9.20) and Figures 9.15/16 below illustrate this use of gesture space.

Figure 9.15: Two metaphorically pointing gestures used to indicate two referents (S1/S2).

Figure 9.16: Two subsequent gestures referring to the previously introduced referents by catchments (S3/S4).

(9.20)

S1 S2 S3
*****/***** ***
Sa de fanmir, zot ti organise. (…) Mon fanmir ti responsab bokou lavyann. (…)
DEM two family 3PL TNS organise POSS family TNS responsible much meat
'The two families organised [the wedding]. My family was responsible for the meat […].'

S4
****
Lot kote ti responsab zafer labwason, salad, eksetera.
Other side TNS responsible thing drink, salad, etc.
'The other side was responsible for drinks, salad, etc.'

S1: Art-rh, hs-5, P-TU, mov-arced, qu-M, pos+3
S2: Art-rh, hs-5, P-TD, mov-arced, qu-M, pos+2
S3: Art-rh, hs-A-open, P-TB, mov-arced, qu-M, pos+4
S4: Art-rh, hs-5-lax, P-TD, mov-arced, qu, M, pos+1

As is visible from the figures above, the participant produced gestures in two general loci which are on two opposite sides in gesture space. She introduces the two loci in her first two strokes, where she assigns one family to one side, and the other family to the other side (Figure 9.15). This division of gesture space is visible in her later gestures as well (Figure 9.16). In S3, she specifies that the first locus is associated with her part of the family. She then goes on to list all the different organisational tasks of her family during the preparation of her wedding, the details of which are not displayed here. However, during the listing of the individual tasks, she produced several iconic gestures for individual members of her family, and individual food items her family had organised, which were performed in the same locus as well. Finally, when she continues to list the responsibilities of her husband's family, she produces an arced gesture (S4) ending at the locus in gesture space which had been assigned to the second of the two families in S2. Thus, throughout her narration, there are fixed positions in gesture space associated with two different referents.

Catchments can not only occur in referential gestures, but also in beats, which rhythmically accompany speech. In example (9.21) and Figure 9.17 below, the participant produces one referential gesture (S1) which metonymically points towards her conversation partner, whom she has chosen to assume the role of the father. After this referential gesture, the participant produces two beat gestures, which nevertheless are produced at the same locus in gesture space as the referential gesture before.

Figure 9.17: Catchments conveying person reference in beat gestures (S2, S3).

(9.21)

S1 S2 S3
********* *****/*****
Ou msye i bezwen li osi konnen ki son rol konman papa.
POSS husband PAR need 3SG also know who POSS role like father.
'Your husband also needs to know his role as a father.'

S1: Art-lh/rh, hs-5lax, P-TB (rh)/P-TU (lh), mov-straight, qu-M (rh)/qu-S (lh), pos+3 (rh)/pos3(lh)
S2: Art-lh/rh, hs-purse, P-TB, mov-bendr (lh)/-bentp(rh), qu-S, pos+3
S3: Art-lh/rh, hs-purse, P-TB (rh)/P-TU (lh), mov-straight, qu-M, pos+3

Thus, even though the predominant function of these two gestures is to rhythmically underline the participant's speech, they still constitute a certain referentiality. This pattern, i.e. a referential gesture being followed by several beat gestures performed in the same position, occurred quite often in the corpus and is reminiscent of the reduplication of pronouns that has been attested for speech.

Finally, catchments also convey reference metonymically. In (9.22) and Figure 9.18 below, the speaker refers to a hypothetical neighbour from the past, which she has already mentioned several times in speech and by gestures produced in a similar position in gesture space. While she utters the sentence in (9.22), she produces a gesture that simultaneously conveys reference on two levels. First, the gesture enacts the act of giving something to a person. On a second level, the position in gesture space indicates that this object is given to the hypothetical neighbour that was mentioned before. Thus, this is an instance of metonymy, in which the action of giving is used to refer to the recipient by means of gesture phonology.

Figure 9.18: Catchment metonymically referring to a discourse referent.

(9.22)

S1
****

Mon ti annan en pti keksoz, mon anmenen.

1SG TNS have ART little thing, 1SG bring.

'I had a little thing, I brought it [to her].'

S1: Art-rh, hs-B-lax, P-AB, mov-arced, qu-M, pos4

In sum, KS referent-tracking throughout discourse not only involves the use of pronouns and other referential forms associated with referent maintenance (see Section 9.3.1), but also gestural means. This section has shown that catchments are a strategy to keep a referent present even after its initial mention and to refer back to it after a certain period of time. Furthermore, catchments can occur across gesture types, i.e. iconic, deictic and even beat gestures may display information that links to with a previously introduced referent.

9.5 SUMMARY

In the previous chapter, the interaction of gestures and speech in multimodal reference to locations and individuals was described. This analysis could be extended in the current chapter by the inclusion of contextual factors and aspects of information structure. Section 9.2 provided insights into the interaction between reference and context. It could be shown that in KS spatial reference, the choice of FoRs is guided by the availability of shared cultural knowledge. As such, a mixed FoR could be attested for KS, which is characterised by a mix of absolute and relative features across modalities, within the gestural domain itself and across contexts. Locally-anchored narrations, which are characterised by the availability of shared cultural knowledge in the spatial domain, could be identified as one context triggering the use of an absolute FoR in KS co-speech gestures. In KS person reference, extralinguistic context is frequently used to substantiate reference to fictive characters (see Section 9.2.2). Here, gestures play a twofold role: they simultaneously create and make use of extralinguistic information to refer to individuals, such as by ad hoc ascriptions involving conversation participants. This strategy is paralleled in speech, in which this ascription is not only announced, but also further developed, as the examples of character impersonation have shown.

In addition to contextual features, aspects of information structure also influence the mobilisation of KS reference forms across modalities. Referential givenness, i.e. whether a referent is newly introduced, reintroduced or maintained, guides not only the selection of vocal reference forms but has also an impact on gesture rate as well as gestures' semiotic and semantic relation to speech. Furthermore, KS displays a multitude of strategies to actively foreground referents, such as focalisation, topicalisation, clefts, dislocation, reduplication and repetition. These strategies not only reflect the speaker's communicative intent but also facilitate the resolution of a referent. The latter function can be regarded as a strategy to counterbalance the morphosyntactic reduction that is found in the KS pronoun system and the occurrence of bare nouns. Furthermore, the foregrounding of referents in speech has also been found to be paralleled in gesture to a certain extent. Especially dislocations tend to be accompanied by co-speech gestures, which results in an enhancement of the emphasis. Finally, KS gestures are also used to track referents across longer discourse segments. The occurrence of catchments in iconic, deictic and beat gestures facilitate the interpretation of a reintroduced referent.

In sum, the analysis of KS multimodal reference has revealed that reference is inherently multimodal. Both in spatial and in person reference, gestures and speech are closely intertwined on a temporal, semantic, and semiotic level. Furthermore, the analysis has shown that the two modalities are not merely juxtaposed but interact with each other in a complex process. Furthermore, this dynamic characteristic concerns not only multimodal interaction but also reference itself. The

mobilisation of multimodal reference forms in situated communicative interaction is a dynamic process in which reference is actively created by the speaker. Moreover, the creation of KS reference in a communicative situation can be regarded as a flexible process that interacts with context, communicative intent and information structure. This flexibility and the variable mix of strategies to refer to individuals and locations can be regarded as an important defining feature of KS multimodal reference.

After Chapter 7 described the form features of KS multimodal reference, and Chapter 8 and 9 uncovered the strategies and processes of their mobilisation, Chapter 10 now turns to the communicative ecology in which these references occur. It aims to show that sociohistorical and sociocultural aspects within this ecology play an important role in the description of the KS reference system.

10 MICRO-ECOLOGY OF COMMUNICATION ON THE SEYCHELLES

10.1 INTRODUCTION

This chapter describes selected aspects of the communicative ecology on the Seychelles and their relevance to the KS multimodal reference system. As already mentioned in Chapter 5, Creole languages and societies are characterised by the specific sociohistorical circumstances of their emergence and display a certain 'mix' of features. This chapter demonstrates that this very special communicative ecology is reflected in the way KS speakers refer to individuals and locations across modalities, as suggested by Goffmann (1964), Kendon (2004a; 2004b) and Streeck (2009; 2010; 2013). Section 10.2 describes selected cultural aspects of the Seychelles, such as the social structure and prevailing language attitudes, and uncovers aspects of hybridity and the 'third kind' in Seselwa culture[111]. In section 10.3, a connection is drawn between this ecology of communication and the KS multimodal reference system. It is shown that the characteristics that define Seselwa culture and society are also present in the KS reference system. In addition, the role of shared cultural knowledge and the status of gesture in KS is further illustrated.

10.2 CULTURAL ASPECTS OF SESELWA SOCIETY[112]

10.2.1 Social structure and language attitudes on the Seychelles

An analysis of communicative practices in interaction requires that sociohistorical and sociocultural aspects are taken into account as a basis on which this interaction is performed. Thus, the social structure on the Seychelles, both during colonial times and nowadays, is an important factor shaping communicative interaction. The colonial past of the Seychelles was characterised by a specific demographic situation. According to Fleischmann (2008: 25), "the numerical superiority of Africans and the relative poverty of the Whites […] led to a slow ethnoracial intermingling and the gradual creation of a comparatively homogeneous society". Nevertheless, forced labour in the form of slavery

[111] See Chapter 5.5 for the theoretical assumptions underlying the terms 'hybridity' and 'third kind' in postcolonial studies.

[112] In order to value indigenous knowledge and receive an assessment of the sociocultural situation on the Seychelles by the speech community itself, this chapter relies to a large extent on the sociocultural interviews conducted in 2014 and 2015. The names of the interviewees will only be given if permission was granted to do so.

was a reality for a long time, and prevailed even after its official abolition in 1835. Thus, "for a lot of people on the Seychelles, slavery was not very long ago" (P. Choppy, p.c.). This, in turn, also means that even though the Seychelles declared independence in 1976, the memory of forced labour and suppression is still present, especially in the older generation.

The social structure of the Seychelles nowadays is characterised by an overarching egalitarian view, in which equity between individual members of the island community is emphasised. This becomes evident if the meaning of the term 'Creole' on the Seychelles is contrasted with e.g. its use on Mauritius. While on Mauritius, the term 'Creole' is exclusively used for Franco-Mauritians and the part of the population with traces of African descent, it does not refer to inhabitants with Indian or Chinese roots (P. Choppy, p.c.). On the Seychelles, in contrast, the notion of being Creole is embraced by all parts of the population, regardless of individual traces of ancestry (P. Choppy, p.c.). Furthermore, as interviews conducted by Naylor (2005) on the Seychelles reveal, the integration of all parts of the society can be traced back to not only to the sociohistorical developments, but also to the relatively small size of the island communities on Mahé, La Digue and Praslin, and, more importantly, to a prevailing cultural identity of equity on the Seychelles. As one of Naylor's interviewees puts it, "You can try to stay alone for a while … then something will compel you to change" (Ibid.: 6). Also, especially after the revolution an emphasis was put on the equality of all members of the society, which is why labels such as *Kreol Nwar*, i.e. Creoles of African descent, or *Kreol Malbar,* i.e. Creoles of Indian descent, have lost importance more and more, especially in the younger generation (Z.-K. Mahoune, p.c.)[113].

In addition to the social cohesion on a societal level, the majority of participants have stressed the high level of solidarity not only amongst family members but also amongst neighbours. However, this close social network of an extended family and neighbourhood is also perceived to have weakened recently, due to the building of housing estates and a development of the younger generation towards an independent and individual life (Z.-K. Mahoune, pc.). Most of the participants also made a connection between an increase in European influence and the decrease of mutual care among neighbours. Nevertheless, some participants acknowledged that despite these developments, there is still a predominant sense of solidarity fostered by the many community centres and community activities in the individual districts, especially in the rural areas of Mahé, Praslin and La Digue. This may be further supported by the fact that everyday life on the Seychelles takes place predominantly outside, due to the climatic circumstances. This, in turn, goes hand in hand with an elevated degree of social interaction.

[113] As Z.-K. Mahoune (p.c.) has emphasised, the term Kreol has undergone several connotative changes on the Seychelles. While first, it was used for people of African descent only, later it was further differentiated to apply to several groups with distinct physical appearance. Nowadays, "it seems that most of the youth, fortunately, are 'colourblind'".

The linguistic situation, including language use and language attitudes, is another aspect of the cultural ecology that has to be taken into account for a holistic approach to KS reference marking. As described in Chapter 5.7, the Seychelles Constitution lists three national languages – KS, English, and French – which is why the Seychelles are one of the first nations to have endorsed the status of its Creole language. Moreover, the government of the Seychelles has made great efforts to promote and further develop KS, by creating institutions such as the Komite Kreol or the Lenstiti Kreol Enternasyonal. This is in strong contrast to the status of KS before the independence, when it was regarded to be inferior to the languages of the colonisers, i.e. English and French. Indeed, one participant recalled being punished in school when she spoke KS by being forced to carry a paper on her back which read "I must not speak Creole" (Interview conducted in August 2015). This strong stigmatisation of KS and its association with low prestige in the past is still visible today in the sometimes ambivalent attitude of KS speakers to their languages. Even though the majority of the participants expressed strong pride of their Creole language in the sociolinguistic interviews, it still is perceived as a language suited mostly for the private domains[114]. Education and economic success, in contrast, are often associated with English instead of KS. This is partly also due to the awareness that in a globalised world, English is more useful than KS. As one participant put it, "Why would you want to learn KS? It is of no use outside of the Seychelles" (Interview conducted in September 2014). This is reminiscent of many reactions to the decision to promote KS and declare it a national language shortly after independence (Interview conducted in July 2015). This ambivalence, which can be seen as a "symptom of ex-slave societies" (P. Choppy, p.c.), comprises sincere affection for KS (*Nou koz nou Kreol*, 'We speak our Creole', Interview conducted in September 2014), with the deeply rooted concern that the language may be perceived as unsophisticated and not good enough to be used beyond the private domain. Nevertheless, KS is predominantly valued, which is also reflected by many participants' concern that the increasing role of English in the everyday life of the younger generation may lead to a decline of KS[115].

Despite French being the lexifier of KS, English plays a much more important role in the everyday life of the Seychelles. It is medium of instruction from Primary 3 onwards (Bollée 1993; Hoareau 2010; Minister Ledikasyon 2004, 2014) and used predominantly in the official domain. Furthermore, due to digitalisation and globalisation, English is present in the private domain as well, especially in the everyday interactions of the younger generation. English is thus the language of pop culture and associated with a modern life. In addition, the popularity of the Seychelles as a holiday destination leads to an increased presence of tourists on the islands, the majority of which uses English

[114] This supports the findings of Fleischmann (2008: 136), who also noted that "it was felt that the support of Creole should be restricted to a certain level".

[115] This concern was not only uttered by older participants, but also by many younger interviewees.

or French as a medium of communication. Due to the co-presence of English with Kreol in almost all domains, the linguistic situation on the Seychelles can be described as developing towards societal bilingualism. Moreover, the two languages are flexibly used, depending on the interlocutors. Many participants mentioned in the sociolinguistic interviews that except for the private domain, they used both KS and English interchangeably, mostly depending on the competence of the interlocutor in KS. Nevertheless, all of the participants noted that KS, as their native language, would always be the first choice in a conversation. However, a few participants have also stressed that they speak English to their children at home, in order to provide them with a certain advantage for their later life. Also, most participants felt more comfortable using English in the written domain, which is due to two factors: first, the older generations did not learn how to write in KS in school, and second, the standardisation process of KS is still in progress. Even though there is an official orthography (Bollée 1977; Bollée and D'Offay 1978), the habitual use of KS as a written medium of everyday life is still not established to the degree English is. Furthermore, the representation of texts written in KS is still lower than texts in English, even though there is a growing body of literature composed in KS.

One outcome of this multilingual situation on the Seychelles is the presence of KS structures in the Seselwa variety of English. For example, reduplication of pronouns or the combination of several referential strategies in first person reference also occurred in interviews conducted in English. Furthermore, KS speakers apply a certain degree of code-switching in everyday communication, which is also represented in some of the examples presented in the previous chapters[116]. However, the languages involved in code-switching have changed over time. During the time of the independence, more French elements were present in KS (N. Salomon, p.c.). It is only during the last decades that the role of English has increased in importance and has, in fact, more or less taken over the role previously assumed by French. This recent development is also visible in the code-switching patterns. While the older generation includes both French and English elements in their KS, the younger generation clearly opts for English as the language to be embedded in KS. Despite the fact that code-switching could be attested across generations on the Seychelles, many of the older participants uttered their concerns that the youth might lose a subset of their vocabulary in KS, leading to a decline of the language over time. Others had a rather positive outlook on the development of KS, stressing the creativity of the young generation's use of KS e.g. in the social media or in music (P. Choppy, Z.-K. Mahoune, p.c.).

[116] See e.g. examples (7.1e), (7.5e), (8.1), (8.4), (8.7) and (8.21b).

10.2.2 From 'hybridity' to a 'third kind': Seselwa identity

In Chapter 5.5, several assumptions concerning the nature of 'Creoleness' have been established and can be applied to the cultural ecology on the Seychelles. First, 'hybridity' is used here as a neutral term denoting the multifaceted ancestry and its traces in KS, KS speakers and Seselwa society. Second, the notion of a 'third kind' or 'third space', involving a fusion and permanent translation of cultural elements, can be attested on all levels of Seselwa culture as well. Third, both hybridity and the third space must be perceived as ongoing transformative processes, involving a flexible and creative negotiation of identity, culture and communication.

On a linguistic level, the multifaceted ancestry of KS has already been described in Chapter 5.6 and Chapter 7.2. The superstrate influence of French is omnipresent in the KS vocabulary as well as in toponyms, kinship terms and forms of address. The substrate languages that are assumed to have played a role, i.e. Eastern Bantu languages and Malagasy, are represented in the vocabulary to a much smaller extent. However, as has been described in Chapter 7.2.5, the lexical domains in which substrate influence is represented are predominantly cultural areas, such as 'food and drink', 'the house' or 'animals' (Michaelis and Rosalie 2009). Thus, it is not surprising that many further substrate influences can be found in the corresponding cultural domains, such as in cuisine, music and dance. For example, traditional Seselwa cuisine, such as *kari koko,* 'coconut curry' or *satini papay*, a papaya chutney, displays a lot of Indian influence, which can be traced back to the colonial times, when the domestic workers in the kitchens of the white masters were mainly of Indian descent (N. Salomon, p.c.). Music and dance is another cultural domain where both substrate and superstrate traces can be found. The so-called *kanmtole*, also referred to as *contredans*, is a series of songs and dances that have their basis in European standard dances, such as polka or waltz, but have been interpreted anew by the slaves during colonial times, thus adding an African element to it (N. Salomon, p.c., see also Z.-K. Mahoune quoted in Naylor 2005: 7). In contrast, the music genre of *Sega*, or *Moutia*, which is also found in slightly different forms on the other islands in the Indian Ocean, displays a predominance of substrate influence, and is mainly performed outside, in opposition to *kanmtole,* which is mainly performed inside. In fact, as N. Salomon (p.c.) pointed out, *Moutia* has its origin in Mozambique, and further incorporated a lot of Malagasy influence during colonial times. This music and the corresponding dances were forbidden by the masters, which was the reason why it was performed in secret (Ibid.). While in previous times, the performance also included spiritual rituals, this aspect is no longer found in today's versions (Ibid.). However, what has been preserved is a certain melancholia of the song lyrics, often associated with longing for the homeland or loss of love, which are at times quite spontaneously created on the spot. Nowadays, the *Sega*/*Moutia* genre is a popular cultural asset on the Seychelles, which is valued and performed across generations (Ibid.) Finally, on the Seychelles

there are several paralinguistic click sounds that express affective meaning, a feature that can be found in many Caribbean Creoles as well (Patrick and Figueroa 2002; Haspelmath and the APiCS Consortium 2013), and also in communities in Burkina Faso and Nigeria (N. Salomon, p.c.). The *tyouk*, or also called *fri pwason*, 'fried fish', expresses annoyance, whereas other clicks refer to a disturbing situation or are used for courtship (Michaelis and Rosalie 2013).

As the description above already suggests, Seselwa cultural traditions are not a juxtaposition of European and African elements, but can be better described as fusion of elements in the sense of Bakhtin's (1981) organic hybridity. This fusion emerges through close contact, translation, adaptation and transformative processes. Even though some traces can still be discerned and assigned to substrate or superstrate influence, the majority of cultural traditions on the Seychelles constitute a 'third kind', i.e. an idiosynchratic Creole identity. As P. Choppy (p.c.) puts it, "Creolisation means to manage old knowledge in a new environment and to transform it into something new". All participants agreed that the overall characteristics of Seselwa culture is the mix inherent to society and culture, with a very own tradition of outdoor life, a love for Seselwa music and dance and life-embracing attitude. Further aspects which the majority of participants identified as 'typically Seselwa' are the mix of clothing, cuisine, an appreciation of social life, and, of course, Kreol Seselwa. This identity is perceived even stronger in the light of the recently increased influence of Western technology, culture and lifestyle, which many participants perceived as a threat to their own Seselwa customs. As already indicated above, despite the strong affection many participants demonstrated towards their Creole identity, and despite the fact that Creoleness and KS are not as heavily stigmatised on the Seychelles as in other postcolonial societies, a deeply rooted ambivalence still persists as a remainder of colonial times. Due to the long-lasting oppression during colonisation, some parts of the population may still suffer under the psychological stigma of being 'hybrid' (P. Choppy, p.c.). Moreover, with the new influence from Western culture due to globalisation and digitalisation, the notion of being not European enough, and not African either, may have found its way into the younger generation again.

However, there are also many instances which show the process of cultural negotiation and incorporation of new elements, such as the increase of Hip Hop music combining KS and English in a very creative fashion. This also further demonstrates the variability and flexibility that is associated with Creoleness. Furthermore, in the gestural domain there are many elements that are idiosyncratic to the Seychelles, such as emblematic gestures that use different handshapes, movements and locations in gesture space depending on whether one would like to call the attention of a bus driver, a taxi driver, or a *taxi pirat*[117]. Other emblems, which also express interactive features, show some

[117] While official taxis are mainly used by tourists, a *taxi pirat* is a privately arranged lift predominantly used by the local population.

parallels to Western emblems, such as shaking the index finger next to the ear, meaning 'I can't hear you', or throwing the hand over the shoulder, with a *5-lax* handshape, meaning 'I don't care'.

10.3 Multimodal Reference in the Light of the Communicative Ecology of the Seychelles

10.3.1 Shared cultural knowledge

In KS, multimodal reference to locations and individuals not only conveys information about a certain referent but also reflects the shared cultural knowledge of KS speakers. As the analysis Chapters 8.3 and 9.2 has revealed, shared cultural knowledge about locations, topological setups as well as distances is predominantly expressed by KS speakers in the gestural domain. Even though this information can also be conveyed by speech, it was mostly presented by means of an absolute FoR shaping the phonology and semiotics of co-speech gestures. Furthermore, observations of spontaneous interaction have shown that this 'absolute' orientation of gestures is also understood by the interlocutors. For instance, a casually produced gesture accompanying a spatial reference, which was oriented towards the wrong direction, was explicitly corrected by a participant by pointing into the actual direction of the location (A. Gabel, p.c.). While the participants' 'absolute' orientation was mainly restricted to locations on Mahé, the notion of space related to the Seychelles also includes La Digue and Praslin as well as the other islands in the vicinity of the three main islands. Since the majority of the other islands are uninhabited and since a visit is rather expensive, there are only few everyday activities that put them into the centre of attention. Thus, many participants noted that when they speak of the Seychelles, they mostly think of La Digue, Praslin and Mahé. These three islands are perceived as a unity but also as three separate locations, each associated with its own customs and traditions.

In general, the anchoredness of KS speakers in their environment seems to be very strong, which is suggested by the presence of an absolute FoR in not only locally-anchored narrations, but also in the elicited pointing gestures and route descriptions (see Chapter 8.3). Moreover, this finding is further supported by the sociocultural interviews and the discussions that arose in the course of locally-anchored narrations. Even though there is an increasing tendency to move to Mahé, and especially into the vicinity of Victoria, there is still a strong feeling of rootedness in the original homes, as some participants explicitly discussed in their locally-anchored narrations. This strong connection between people and place of origin on the respective islands is further promoted by the collective

effort to preserve the environment on the Seychelles[118]. Furthermore, the warm climate leads to a predominance of outdoor life, with traditional kitchens outside and regular social gatherings at the beach. This further substantiates the relationship between individual and (natural) environment on the Seychelles.

Similar to the rootedness in physical space, KS speakers are strongly grounded in social space. Due to the relatively small size of the community, there are rather close social networks, even though many participants criticised the decline of the extended family and the tendency towards individualism. Especially the communities on Praslin and La Digue are very rooted in their social network and their individual cultural traditions, which is why they also identify themselves with the terms *Pralinwa* and *Digwa* (Z.-K. Mahoune, p.c.). Furthermore, the association of an individual with a certain family is still an important characteristic on all three islands. Despite the recent development described above, which lead to dispersion of family members over several locations on the island(s), a family name is still very important (P. Choppy, p.c.). Furthermore, one's family name is often directly linked with a specific location, thus fusing the groundedness of individuals in social space with their connection to physical space.

In sum, shared cultural knowledge concerning spatial and social relations is deeply anchored in everyday life, which is also reflected in the KS multimodal reference system. One factor contributing to this rootedness in space and society may be the relatively small community size, both on a geographic and a societal level. In the Seselwa society, the older generation has a very clear picture about the relations in space and between individuals, especially concerning their characteristics in former times. The younger generation still displays this rootedness, but knowledge seems to be more variable and less systematically used as opposed to the older generations.

10.3.2 The status of gesture in KS

The question whether KS speakers gesture a lot has been unanimously confirmed by all participants. In everyday interaction, gestures play an important role and are perceived as very large[119]. Furthermore, as has been shown in Chapters 8 and 9, gestures play an integral part in KS reference marking, not only supporting but also complementing information conveyed in speech.

[118] Due to their relative isolation, the Seychelles are home to a multitude of endemic species, such as the famous *Coco de Mer*.

[119] As Chapter 7.3 has shown, this perception of 'large' gestures is indeed correct in the sense that peripheral gesture space is commonly used. Strikingly, the use of extended gesture space has also been described for Louisiana Creole by Gardner (2011).

Interactional gestures frequently occur without any counterpart in speech and often involve body contact between the two communication partners. For example, the general way to get past individuals who stand in one's way, as it is often the case on public transportation, is a silent, repeated tip on that person's arm, shoulder or back with an extended index and middle finger. If attention is requested during a conversation, participants often touch each other gently on the arm. Furthermore, interactive gestures expressing that a person is willing to defer to another person have been frequently observed to involve gesturing of the head or the hand without any counterpart in speech.

Interactional space in KS conversations fluctuates between two extremes: either the conversation is conducted over a longer distance, or the interaction is characterised by a certain degree of closeness between conversation partners. Many spontaneous instances of prolonged conversations where individuals were standing multiple meters away from each other, for example on two different sides of a road, could be observed. Furthermore, this extended interactional space is also common even if there is the opportunity to get closer to each other. For example, conversations were observed in which interlocutors sat on the opposite ends of two benches, even though in principle it would have been no considerable effort to move and sit next to each other. This extension of interactional space is complemented by the role of eye gaze in conversations. Many spontaneous conversations between KS speakers do not involve a lot of instances of mutual eye gaze. In fact, several conversations were observed that started when two individuals approached each other, and were continued after they had passed each other, without one of the participants turning their head backwards. Also, at social gatherings, conversations may be conducted with interlocutors facing into opposite directions with only occasional eye contact. At the same time, conversations can take place in very short interactive space, as it is the case on public transportation or in typically crowded locations, such as bus stops. Under such circumstances, prolonged and repeated body contact, even amongst strangers, is the norm, and conversations are conducted very close to each other.

Gestures also play an important role in intercultural communication on the Seychelles. In instances where a KS speaker knows or assumes that the interlocutor does not speak their language, silent, gestural interaction is very common. This has been observed, for example, in Indian grocery shops where KS speakers interacted with the shop owners, whom they assumed not to speak KS, by gestural means only. While Indian ancestry is part of the Seselwa society to a certain extent, there is also a considerable group of Indian workers that have immigrated to the Seychelles rather recently, and who often do not speak KS (Z.-K. Mahoune, p.c). Many instances of KS customers interacting silently with Indian shop owners have been observed, involving not only interactive gestures but also iconic gestures to communicate with each other. Furthermore, the use of gesture production also increased in conversations between locals and non-locals, even if they were conducted in English with a high level of proficiency displayed by both interlocutors. However, it has to be noted that this

elevated frequency of gesture production was also produced among KS speakers in very informal and private gatherings, especially during discussions and storytelling.

10.3.3 Hybriditiy, creativity and variability in KS reference

As has been mentioned above, the sociohistorical circumstances under which Seselwa society, culture and KS have emerged is directly linked with colonialism. Thus, hybridity, creativity and variability can be seen as key features of not only the society but also its language. Furthermore, some aspects of cultural tradition and shared cultural knowledge can be assumed to be implicitly conveyed, as the analysis of spatial reference in the gesture system has revealed.

The expression of spatial reference in KS has been shown to be mixed in terms of spatial FoRs. This mix is established on two levels: first, KS speakers apply both the absolute and the relative FoR in everyday conversation, and the selection of individual FoRs is highly context-dependent. Second, the absolute FoR is predominantly represented in the gestural domain, whereas the relative FoR is expressed in both modalities. Furthermore, the expression of figure-ground relations is characterised by a split as well. Gestures are mainly used to express information about the ground, whereas the figure is mostly represented in speech. The most common strategy of co-speech gesture interaction is a combination of figure and ground in speech, with an additional expression of the ground in gesture. However, a considerable part of figure-ground relations is also characterised by a division of labour among the modalities, with the figure being expressed in speech and the ground in gesture.

Person reference in KS underlies the same principle of hybridity and displays a high degree of variability as well. In speech, KS speakers make use of ambivalent strategies, with reduction, conflation and ellipsis on the one hand, and reduplication and repetition on the other hand. In the gestural domain, person reference is mainly guided by redundancy, i.e. gestures, especially metaphorical pointing gestures, are performed to support information conveyed in speech, rather than complementing it with additional semantic information. Furthermore, a considerable amount of gestures associated with person reference makes use of ad hoc ascriptions of referents, such as metonymic and direct pointing gestures, which rely on information provided by the extralinguistic context. This context-dependency is also an important factor in the interpretation of referential expressions in speech. Thus, it is both shared cultural knowledge and shared knowledge about the linguistic and extralinguistic context that guides the interpretation of referents.

In the expression of referents across discourse, gesture and speech are more aligned in their use. The more continuous the referent in discourse, the less information is conveyed. This reduction not only concerns reference forms in speech, but also the general use of gestures. In contrast, less continuous and newly introduced referents are not only expressed in more detail in speech, but are

also more likely to be accompanied by gestures. Finally, information structure has an influence on speech only, with elements being dislocated, repeated or reduplicated, stressing both sentence topic and sentence focus. However, only some of these vocal means of emphasis are accompanied by an increased gesture frequency.

Thus, KS reference to locations and individuals is characterised by variability and hybridity, constituting a mix on multiple levels. First, both modalities are combined to establish reference, with a high degree of redundancy in person reference, and a tendency towards mutual complementation in spatial reference. Second, the different referencing strategies available to spatial and person reference are employed in a very dynamic, context-dependent fashion. Contextual factors, such as extralinguistic context, linguistic context, and culturally shared knowledge play an important role in KS reference and are flexibly taken into account for reference production and interpretation. Taking into account the mixed cultural and linguistic heritage of KS and its speakers, which goes along with variability and creativity, it can be postulated that this characteristic is reflected in multimodal reference to locations and individuals as well.

In sum, the sociocultural and sociohistorical background of KS and its speakers is the basis of the Seselwa linguistic and cultural habitus, characterised by hybridity, variability and creative transformation. Furthermore, the interaction of gestures and speech in KS reference marking can be embedded into this micro-ecology of communication, with respect to the affordance of the individual modalities towards the interlocutions, the circumstances of use, the ecological circumstances of daily interaction and the sociocultural norms and regulations of use (see Kendon 2004b: 350 f.). Similar to Kendon's (2004a; 2004b) analysis of multimodal interaction among Neapolitans, KS speakers make use of an idiosyncratic interaction of gesture and speech in spatial and person reference. The extended gesture space thus promotes both visibility and attention by the communication partners, especially in the frequently occurring long distance conversations. At the same time, the large gestures make it possible that eye gaze of an interlocutor must not necessarily be met to receive the information conveyed in gestures. Furthermore, the patterns of multimodal reference in KS are shaped by the availability of shared cultural knowledge. In situated interaction that is locally-anchored, KS speakers make use of an absolute FoR in their spatial references and include extralinguistic information in their reference to individuals. Moreover, both speech and gestures are used together in both private and public interaction, both of which take place outside in a considerable amount of everyday life.

The ecological circumstances of daily interaction on the Seychelles further shape the form of co-speech gestures. As already described in Brück (in press), the 'absolute' orientation, visible in the speaker's gestures, is facilitated by the fact that Mahé is a rather small island, which is characterised by a clear north-south distinction as well as a coastline which is contrasted by the mountainous inland. Furthermore, the tendency for everyday life to take place outdoors further substantiates shared

cultural knowledge about the spatial setup of the island. Moreover, the overall sense of solidarity and the anchoredness of KS speakers not only in spatial but also social networks is reflected in their preference for recognition and association, which is ranked higher than the preference for minimisation. Finally, the sociocultural and sociohistorical background is visible in the often ambivalent strategies, which are flexibly and creatively used according to contextual circumstances. Thus, KS can be described as a communicative system which relies on pragmatic information to a large extent and which assigns an important role to gestures as a means of conveying information and structuring everyday interaction.

10.4 SUMMARY

This chapter has illustrated that Seselwa society is characterised by a strong attitude of equity and solidarity, which is for example reflected in the use of the term 'Creole' for all Seselwa, irrespective of their ethnic descent. Also, there is a strong notion of community and neighbourhood, as well as close family ties. Furthermore, on the Seychelles we find a certain degree of societal bilingualism, with KS as the native language of over 90% of the population and English as a language that is used in schools and in many official domains. Even though French is the lexifier of KS, it is less present in Seselwa everyday life than English. The language attitudes of the Seselwa society towards KS and English is twofold. On the one hand, KS is promoted by governmental institutions, such as the Lenstiti Kreol Enternasyonal, and highly valued by the population as a mother tongue. On the other hand, however, English is still regarded to be more prestigious and more useful in all non-private domains, since it is associated with education, globalisation, digitalisation and technology. The co-existence of KS with English and French, as well as the rather recent development of English being used more often than French in everyday interaction, has a direct influence on the code-switching patterns of KS speakers. While the older generation, which grew up with French as a very dominant language, tends to include both English and French words in their colloquial KS, the younger generation displays a very strong tendency towards switching between KS and English only.

Furthermore, evidence was provided that not only the societal structure and language attitudes, but the colonial past has also shaped the Creole identity on the Seychelles. Both substrate and superstrate influences can be found in all cultural domains, i.e. in traditions, music and dance, food, as well as language. However, the individual influences are not simply juxtaposed, but have rather been fused in a process of translation and reinterpretation, resulting in a 'third kind', or, in other words, an idiosyncratic Seselwa culture. This culture is characterised by variability, flexibility, and creativity. However, at the same time, the postcolonial trauma still has some effects on the notion of

identity, which is why a certain ambivalence can be found as well. In addition, the influence of Western culture has increased again due to globalisation and digitalisation, which adds to the impression of many KS speakers that their identity is being lost.

These characteristics have been shown to be reflected in the KS reference system as well. There are indeed certain aspects that are particular to the KS system and that thus constitute instances of idiosyncratic patterns that cannot be traced back to substrate or superstrate influence. One of these instances is the general anchoredness in space and in society. This shared cultural knowledge is reflected by the gestural system, e.g. in the expression of an absolute FoR, and the vocal system, i.e. in the preference for recognition and association over minimisation. Furthermore, gestures assume a high status in everyday interaction and can in many instances also be used without any vocal counterpart. Finally, social interaction and interactional space exhibit similar properties as the co-speech gesture system does.

In sum, the KS reference system can be embedded in a micro-ecology of communication, specific to the Seychelles. KS speakers display a high degree of variability, flexibility and creativity in their reference system, which is further characterised by the dynamic use of both linguistic and extralinguistic information. This is a direct reflection of the characteristics of Seselwa speakers on a sociohistorical and a sociocultural level. Thus, it has been shown that KS reference marking is indeed a tripartite system, which involves not only speech, but also gestures and cultural factors.

Part III: Discussion and Conclusion

11 Implications of the KS Reference System for the Study of Gesture and Reference

11.1 The Nature of Gesture

11.1.1 KS gestures and Kendon's Expanded Continuum

The KS patterns of reference marking in co-speech interaction described in the previous chapters can be embedded in the five continua describing the characteristics of gestures proposed by Kendon (1988), Gullberg (1998) and McNeill (1992; 1998; 2000b) (see Chapter 3) [120]. Kendon (1988) discriminates gesticulation from sign language, since the former can only be interpreted in relation to speech, whereas the latter requires an absence of speech. Furthermore, he locates emblems in an intermediate position since they can be performed both with and without speech. The KS gestures presented in the previous chapters can be located in different positions on this continuum, suggesting that not only emblems but also other gestures constitute an intermediate position in which speech is optional.

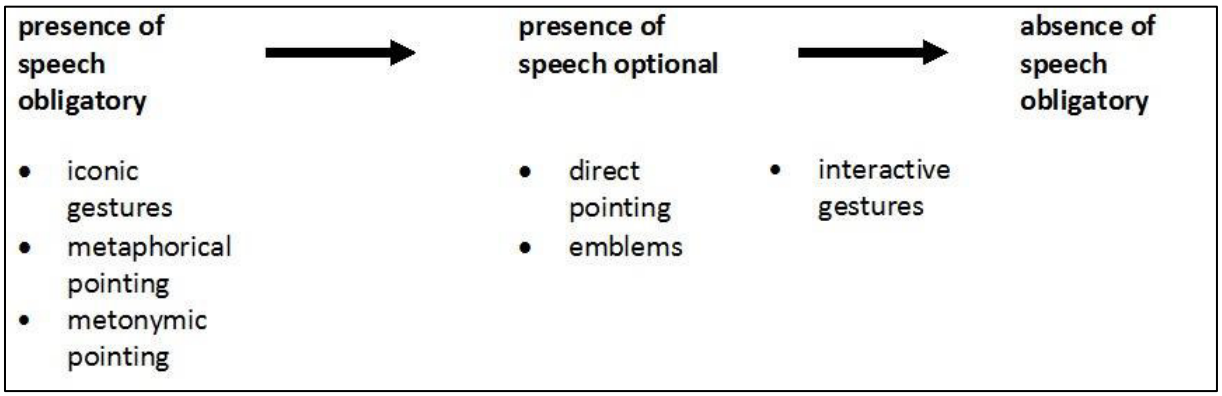


Figure 11.1: Categorisation of KS gestures according to their relation to speech (based on Kendon (1988) and McNeill (2000b: 2)).

[120] Please note that in the following discussion, pantomime and sign language will not be represented, since these two forms of manual expressions have not been part of the study of KS gestures.

The majority of gestures involved in KS spatial and person reference can be found in the same area of the continuum as Kendon's gesticulation, i.e. they can only be interpreted correctly if they are co-articulated with speech. Direct pointing gestures, however, can be interpreted without speech, as it was the case in many pointing tasks, in which silent pointing gestures were often the sole reply to the question "Can you tell me where *X* is?". The emblems presented in Chapter 10 are also more independent of speech than gesticulations, as was predicted by Kendon's continuum. An interesting case is provided by interactive gestures. While some of them may co-occur with speech, e.g. the case of mentioning an addressee's name combined with an interactive touching of their arm, the sociocultural convention for public interaction on the Seychelles seems to favour their production without speech (see Chapter 10). However, to what extent speech is obligatorily absent in these cases still needs to be investigated in more detail, which is why these gestures are located at the borderline region between emblems/direct pointing and obligatorily silent communicative forms, such as sign languages.

The second continuum has been proposed by Gullberg (1998: 96) and lists gesture types according to their referentiality. The KS gesture system matches her overall categorisation, but suggests that a further differentiation must be made between abstract pointing, i.e. metaphorical pointing, and metonymic pointing (Figure 11.2). Metaphorical pointing is at first an instance of pointing to empty space. These gestures express referentiality only in a second step of abstraction, similar to beats, which can be used referentially by the use of catchments. The interpretation of metonymic pointing, also takes place on two levels. On the first level, they behave like direct pointing gestures by projecting a vector to a reference point, i.e. an existing location, person or object in the surroundings. On the second level, they metonymically indicate a target, i.e. a referent which is closely connected to the reference point. Thus, the interpretation of metonymic gestures requires a two-step process, which is why they are not as straightforwardly referential as direct pointing gestures or iconic gestures which model or enact a referent. However, they are more referential than metaphorical pointing gestures, since they are not directed at a location in empty space, but rather at a concrete entity in the immediate surroundings. Finally, direct pointing gestures creates reference to the intended target immediately, without any further intermediate steps and interpretations necessary.

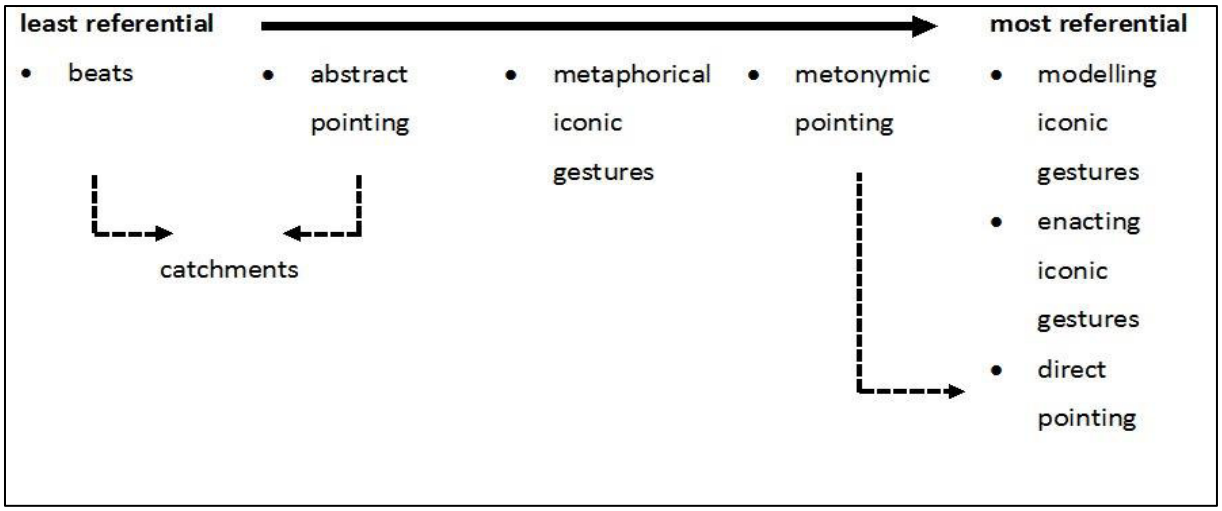


Figure 11.2: Distribution of KS gestures according to referentiality (based on Gullberg (1998: 96)).

It is important to note that categorising beats and abstract pointing gestures as least referential does not imply that they are non-referential. Both gesture types draw their referentiality from catchments, which indicate their association with a certain referent. While this is commonly accepted for abstract pointing gestures, the referential function of beats is often neglected. However, as McNeill (1998: 18) has emphasised, beats are not only a means of rhythmically structuring the speech stream or emphasising individual words but they also "clarify the role of referring forms in speech and track the occasions where things are important beyond their own immediate context of presentation". Furthermore, the distribution of gestures according to referentiality can be regarded as a simplified categorisation, since gestures may combine several functions at the same time. As example (9.21) and Figure 9.17 have suggested, beats may also involve repeated direct deixis, as can iconics. This is the reason why McNeill (1998: 18) suggested to refer to gestural dimensions rather than to individual gesture types. Similarly, Kendon (2004b: 107) notes that these different gesture types are "provisional working instruments which may be useful within a certain research perspective […] but are not at all to be supposed as universal or general schemes".

Continuum 3 lists the individual gestural dimensions according to their linguistic properties. An expressive form is considered to be linguistic, if it underlies phonological constraints, is compositional and can be syntactically combined with other forms. Similar to the distribution on the first continuum, the majority of KS gestures fall into one category, with the exception of direct pointing gestures and emblems.

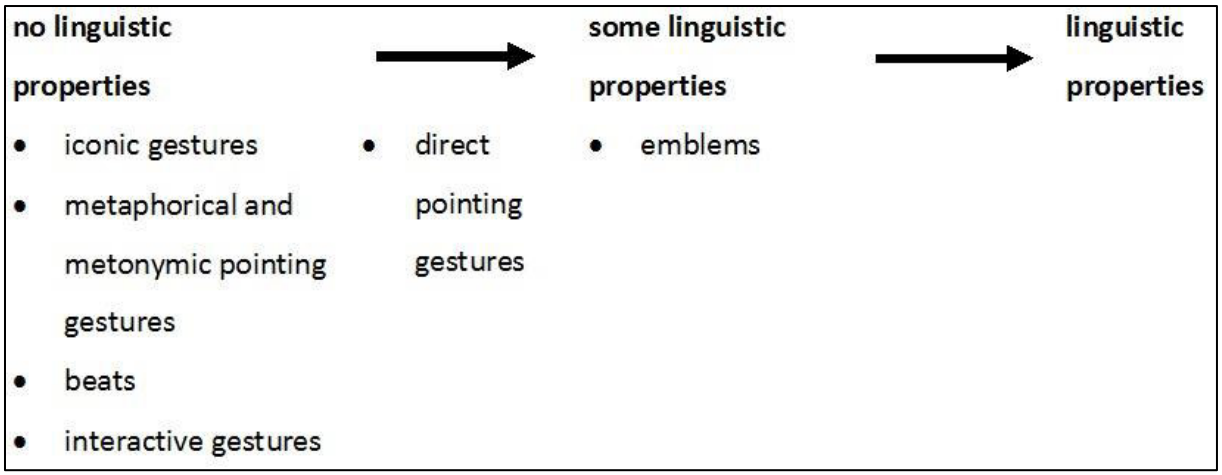


Figure 11.3: Distribution of KS gestures according to linguistic properties (based on McNeill (2000b: 3f)).

Most of the KS gestures do not display any of the linguistic properties, i.e. they do not underlie any phonological constraints and are shaped according to context rather than to sociocultural convention, as it is the case with words. Furthermore, they can neither be decomposed into smaller meaningful units nor can they be combined with other units to form a polymorphemic gesture or even a syntactically larger unit. KS direct pointing gestures seem to be guided by certain phonological tendencies, such as flat handshapes used for vectors or *IX* handshapes used for locations. However, these are tendencies rather than phonological constraints, which is why a direct pointing gesture with an *IX* handshape could be used to indicate a vector without being misunderstood. In other cultures, however, direct pointing gestures seem to be more phonologically restricted and would thus fall into the same category as emblems[121]. Emblems do display certain phonological constraints. As McNeill (2000b: 3) points out, "there are differences between well-formed and not well-formed [emblematic] gestures". Thus, if in KS a circling index finger was produced on the torso rather than next to the ear, it would not be recognised as a conventional way of signalling 'I cannot hear you'. However, the KS emblems differ in the degree of phonological constraints. Replacing for example the gesture usually used by KS speakers to call the attention of a bus driver with the gesture usually used for a *taxi pirat* would not result in general confusion or a perception of an ill-shaped gesture. In sum, while some KS gestures do display phonological constraints to a little degree, none of them exhibits morphemic or syntactic properties as it is the case with linguistic units in spoken and signed languages.

The tendency of some KS gestures to be phonologically restricted to some extent can be described in more detail by continuum 4, which categorises gestures according to their degree of

[121] See e.g. Wilkins (2003) for a description of several distinct handshapes conventionally used in direct pointing in Arrernte.

conventionalisation. Again, the KS gesture system suggests that a more detailed differentiation is necessary.

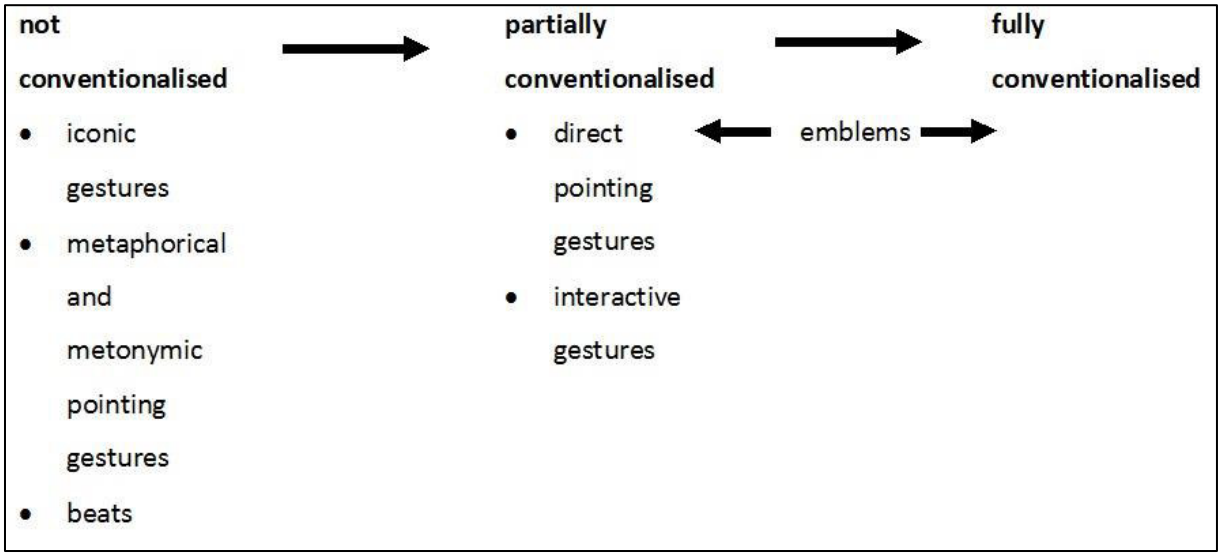


Figure 11.4: Distribution of KS gestures according to conventionalisation (based on McNeill (2000b: 4f.)).

As already indicated above, KS direct pointing gestures are conventionalised to some degree, as the description of gesture families in spatial reference (Chapter 8.3.4) has illustrated. Similarly, Chapter 10 has listed some interactional gestures that display conventionalisation and tend to fall into two categories. First, interactional gestures directed at an interlocutor tend to be produced with flat handshapes rather than with *IX* handshapes and frequently involve touching the interlocutor's arm. Second, interactional gestures produced outside of a conversation are more often expressed by one or two extended fingers (*IX* and/or middle finger) and involve repeated and short tapping of the arm, shoulder or back of the recipient. Emblematic gestures differ in their degree of conventionalisation and can be partially or almost fully guided by sociocultural standards. This means that not only the form but also the meaning of theses gestures underlies social convention (McNeill 1998). In contrast to linguistic signs, however, the relation between an emblem and its meaning is not fully arbitrary (see e.g. McNeill 1998; Kendon 2004b: 335ff.), as the iconic character of the 'I cannot hear you' suggests.

Finally, the last continuum categorises gestures according to their semiotic properties (McNeill 2000b: 5). McNeill (1992; 1998; 2000b) distinguishes between two general oppositions: global versus segmented, and synthetic versus analytic. As described in Chapter 3.2.2, 'global' refers to the creation of meaning in a top-down process, whereas 'segmented' meaning is constructed from individual parts that are combined to create a meaning. Thus, co-speech gestures are generally described as global since the individual parts of these movements are only meaningful after having been combined to form a whole. In other words, there are no individual meaningful segments of morphemic character, as in

speech, that determine the meaning of the whole expression. The second pair of oppositions concerns the distribution of meaning units among individual forms of expression. Gestures are considered to be 'synthetic' because one gesture can combine more than one meaning unit simultaneously. In speech, however, meaning is distributed analytically, which means that one word conveys one meaning at a time. The analysis of KS gestures suggests that pointing gestures have different characteristics than other types of gesticulation.

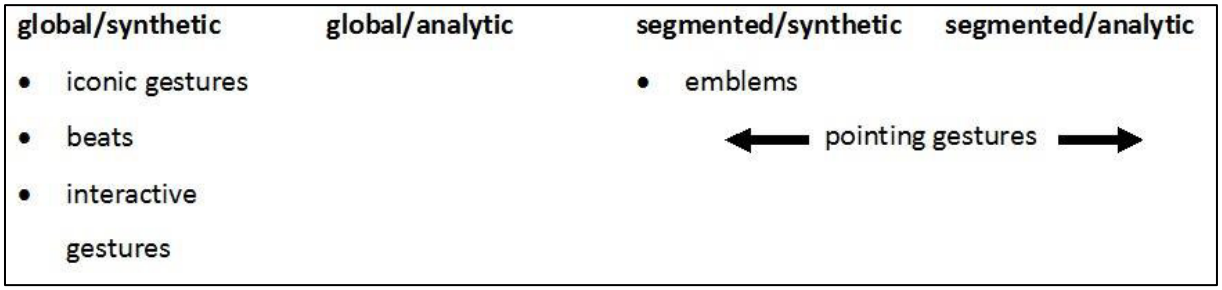


Figure 11.5: Distribution of KS gestures according to semiotic properties (based on McNeill (2000b: 5f.)).

The global and synthetic character of iconic gestures are illustrated by Figures 8.13 – 8.16, which display the gestures produced during a route description. The participant's gestures consist of individual parts: her handshape and palm orientation indicated a metaphorical presentation of individual locations along the path, the vector projected by her arm indicated the general direction of the path, and the position in gesture space indicated the distance between the individual locations and the starting point of the path. These individual parts, however, are only meaningful if the whole gesture is taken into account. In other words, the parts do not generally convey their individual meanings. Thus, the meaning of the gesture is globally constructed. Furthermore, this gesture fuses individual meaning units into one expressive articulation, which is why it can be considered to be synthetic. In a similar fashion, the KS beats and interactive gestures are of global nature and synthetically express more than one meaning unit in a single expressive movement.

Emblems are also synthetic, because they combine several meaning units in one gesture. The circling of the index finger next to the ear combines information on the subject, i.e. the person who produces the gesture, information on the state of the subject, i.e. that the person has difficulties in hearing something, and information on the interlocutor, i.e. that this person obviously produced a speech stream that plays a meaningful part in an interaction. However, in contrast to icons, beats and interactive gestures, emblems are segmented, since they can convey their conventionalised meaning only, when the critical segments, i.e. handshape, movement and position in the case of the KS emblem, are present.

Finally, pointing gestures are also segmented, as the KS data show. The critical segment for deictic meaning is the extension of an articulator, i.e. a finger, a hand or an arm[122], into the direction of the referent. Furthermore, especially direct pointing gestures can be regarded to be analytic, since they express one deictic relation in one gesture, which is why they can also function as substitution for demonstrative pronouns such as *laba*. However, pointing gestures can also be fused with other meaning units, as the route description in Figures 8.13 – 8.16 illustrates[123]. Furthermore, metonymic pointing also may include an interactive element, especially when the reference point is an interlocutor. This was illustrated by example (8.24) and Figure 8.30, in which the participant used one gesture to both metonymically point to a referent and interactively point to her interlocutor. Thus, under certain circumstances, pointing gestures are also synthetic.

In sum, the results are in line with Streeck's (2009: 5) assumption that gestures are "a constantly evolving set of largely improvised, heterogeneous, partly conventional, partly idiosyncratic, and partly culture-specific, partly universal practices of using the hands to produce situated understandings". However, in opposition to Streeck (2009), the next section argues that gestures are indeed a part of language, which itself can be viewed as a set of communicative practices in a given community.

11.1.2 Implications for co-speech gesture interaction

The overall analysis of KS gestures supports the general distinction between speech, which is analytic, segmented, linguistic and conventionalised, and gesticulation, which is synthetic, global, non-linguistic and non-conventionalised. The analysis of co-speech gestures in KS communicative interaction, however, has shown that gestures are not simply juxtaposed to speech, but rather that they are integrated in one overall system of communicative expression. At the same time, gestures are not syntactically constrained and can thus be flexibly used, creating situated reference and potentially combining different semantic and semiotic pieces of information. As such, gestures have the potential to combine both propositional and pragmatic information in one single expression. As McNeill (1998)

[122] As mentioned in Chapter 7, alternative articulators other than the hand were only marginally used by KS speakers. However, Adone and Maypilama (2014) as well as Enfield (2001) and Wilkins (2003) have reported the use of elbow or lip pointing in other cultures. Importantly, the use of these articulators in pointing is also characterised by an extension. In elbow pointing the elbow is extended and in lip pointing the lips are pursed into the direction of the referent. If pointing is conducted by eye gaze only, an extension of the articulator is of course not possible. However, even in this case, a certain extension of the temporal aspects of an eye gaze or an additional tension of selected parts of the face may be involved.

[123] Further examples for fused meanings in direct pointing gestures are provided by Haviland (1993) and Levinson (2003).

notes, this information would be expressed by several units in speech[124]. Emblems and pointing gestures constitute two special types of gesture, which assume an intermediate position between gesticulation and speech, as their distribution across the individual continua suggests. This contrast to gesticulation leads McNeill (1998:14) to the conclusion that emblems are independent adjuncts to speech rather than additional integral parts. The KS examples in Chapter 10.2.2 have illustrated that emblems form a variable class. Some emblematic gestures can be categorised as gesticulation, whereas others show more similarities to speech. The same is true for pointing gestures which can undergo several levels of abstraction and assume both gesticulation-like and speech-like characteristics. Depending on their position within the continua, pointing gestures can thus function as both independent adjuncts and closely intertwined additions to speech.

In multimodal reference, we thus find a division of labour, with co-expressive gestures adding important information on a semantic and pragmatic level. Even in those cases, in which gestures can be classified as redundant, i.e. not complementing speech with additional referential information, they still add an important part on a pragmatic and interactive level. They provide an alternative representation, enhance the referentiality of reduced referent forms, such as pronouns, by catchments, and increase the interlocutor's attention (Kendon 2004b: 176f.). Moreover, they deliver a visual representation of concepts, structures and referents and thus facilitate the interlocutor's interpretation of the conveyed message (Ibid.). As such, gestures help to illustrate implicit or explicit oppositions, the discourse status of a referent and help to foreground certain information in an utterance. In addition, as will be further discussed below, redundant gestures can serve to keep a certain referent activated even if the information is no longer provided by speech. Finally, as the KS data has shown, gestures convey shared cultural knowledge that is not necessarily expressed in speech. As such, "[g]estures are not mere echoes of speech – they are co-expressive" (McNeill 1998:18).

This fusion of gestural and vocal components into one multimodal communicative act can be approached on three levels: structure, interaction and ethnography (Seyfeddinipur and Gullberg 2014). First, on a structural level, the close tie between the modalities is constituted by temporal, semantic and semiotic relations. As Chapter 8.2 has shown, the majority of the KS gestures are produced in temporal alignment with the corresponding elements in speech. Furthermore, on a semantic level, gestures and speech complement each other, forming a co-expressive utterance. In

[124] However, even in the vocal domain there are several 'borderline cases' that fuse propositional and pragmatic information in one single word. In specific circumstances, for instance, the utterance of *good* may convey meaning such as 'You did your job very well', 'I am relieved that this job is finally done' and 'You can turn to the next task now' at the same time. The occurrence of such multifunctional utterances, however, does not change the fact that in principle, speech assigns one meaning unit to one word, which is then syntactically combined with other words to form a sentence.

many cases, there is a division of labour, as the distribution of figure and ground or the expression of an absolute FoR in KS has shown (see Chapter 8.3.1). Moreover, an example for the structure of semiotic integration of co-speech gesture interaction is the expression of multimodal metonymy[125]. In this case, gestures can be used to identify a reference point, with the help of which the referent of a spoken utterance can be discerned. Finally, gestures reflect information structure and discourse status of referents as well. The analysis of KS gestures has shown that gestures behave similarly to speech with regards to discourse status, i.e. newly introduced referents are presented with more linguistic and more gestural material than maintained referents (see Chapter 9.3.1). This structural intertwining of gesture and speech, combined with a division of labour, thus suggests not only that language is inherently multimodal, but also that language and gesture form one system (Kendon 1986, 2000, 2004).

Second, on an interactive level, gesture is characterised by high flexibility and variability. It is only in communicative interaction that the meaning of a gesture is created, and the individual expression of a gesture is "intimately dependent on what the overall communicative aims of the speaker appear to be" (Kendon 2004b: 358). For example, in interaction gestures are produced spontaneously to emphasise referents and discourse structures. In KS this is exemplified by the variable choice of the speaker to express shared cultural knowledge about an existing location, whereas in other cases, existing locations were also referred to by e.g. metaphorical pointing gestures or iconic gestures, depending on the communicative intent of the speaker. Furthermore, the KS data also shows how aspects of referents are spontaneously 'exbodied' (Mittelberg 2008, 2013), i.e. expressed as visual entities in physical space by gestures. In addition, the context-dependency which guides the expression of KS gestures further illustrates how gesture production is guided by interaction. Depending on the interlocutors' common ground, an already known referent is less often accompanied by gestures than a newly introduced one. Also, as described in Chapter 9.3, KS speakers produce more redundant gestures in initial reference to locations, whereas subsequent reference is most often accompanied by complementary gestures. This result suggest a certain audience design of gestures: On the one hand, the introduction of referents is accompanied by gestures that enhance the information produced in speech, increasing the effect that the new referent is being memorised by the speaker. On the other hand, maintained referents are assumed to be already known by the interlocutor, which is why additional information about this referent can be provided by gesture. Moreover, several vocal strategies of foregrounding are also accompanied by a higher frequency of gesture production, as Figure 9.14 has shown, which further supports the notion that co-speech gesture interaction is guided by the communicative intent of the speaker. Finally, KS speakers spontaneously included interlocutors

[125] See e.g. Figure 8.5/ Example (8.4); Figure 8.35/ Example (8.32); Figure 9.1/ Example (9.5) or Figure 9.17/ Example (9.21).

as exemplary protagonists, thus creating a concrete referent to their gestures, which is part of the immediate physical environment.

Third, on an ethnographic level, multimodal interaction in KS constitutes another example of how cultural conventions of gestural expression and the sociocultural and sociohistorical habitus of a community can be directly linked with each other. The Seselwa communicative ecology is characterised by the Seychelles' colonial past, the geographic and climatic conditions, the social structure of the Seselwa community and the 'Creoleness' of the communicative system, which is marked by multiple origins, creativity and variability (see Chapter 10). The KS gestures produced in spatial and person reference are embedded in these circumstances, resulting in the idiosyncratic patterns of flexibility and a mix of strategies that have been described in Chapter 8 and 9.

In sum, we can assume a "functional continuity between language, as manifested in speech, and gesture" (Kendon 2000: 50). Human communication is characterised by a close intertwining of the two modalities, each complementing the other. This cross-modal division of labour involves different degrees of conventionalisation, referentiality, and linguistic and semiotic dimensions that are constituted by speech and gesture. However, together, the two modalities are "co-expressive of a single inclusive ideational complex, and it is this that is the meaning of the utterance" (Ibid.: 61).

11.2 The Nature of Reference

11.2.1 Reference as a multimodal process

The assumption that language is inherently multimodal implies that reference marking, both of locations and individuals, is a multimodal process as well. On a semantic level, individual reference forms and gestural features can be associated with certain types of reference, as Chapter 7.3 has shown. On a pragmatic level, contextual features of the communicative environment, but also information concerning the interlocutors and the social setting of a communicative interaction, shape the form of reference.

The reduced article system of KS exemplifies the context-dependency of reference. (in)definiteness, (non)specificity and (non)individuation of bare NPs can only be correctly interpreted if contextual information of the previous discourse and shared knowledge of the interlocutors are taken into account. In addition, the KS reference system makes extensive use of extralinguistic context to convey information about a referent. In spatial reference, geographic information, such as direction, distance or topology, is conveyed in gesture and dynamically combined with toponyms, demonstratives or nominal descriptions. In person reference, preferences for recognition and

association result in the combination of several reference forms for the introduction of a referent. Furthermore, the spontaneous involvement of interlocutors to concretise abstract person reference in KS, as well as the flexible switch of viewpoints constitute another instance of dynamic reference construction.

The contribution of gestures to reference marking not only involves the addition of certain information, but also the transformation of abstract linguistic elements into visual elements that are produced in physical space. Thus, gestures combine linguistic and extralinguistic context into one single visual entity. If this combination is applied to the study of deixis and anaphora, it can be argued that the two have a common basis. Even though the former is directed towards extralinguistic referents and the latter towards linguistic referents, both constitute an instance of pointing that can be expressed by similar gestural and vocal means. In KS, demonstrative *sa*, for example, can be used to refer to an extralinguistic entity but also to refer to a discourse referent. Similarly, pointing gestures can be directed at physically existing referents or, metaphorically, at discourse referents that are located in empty gesture space. Moreover, the gesture-speech ensemble frequently combines both anaphoric and deictic expressions in one multimodal utterance. In example (8.18) and Figure 8.26, a pronoun refers anaphorically to a referent, complemented by two gestures indicating the direction of the referent in relation to the location of the speaker. The most striking evidence for a common basis of anaphora and deixis comes from metaphorical pointing gestures, which combine both functions in one expressive movement. In Figures 9.15/9.16 and example (9.20), the speaker assigns two referents to two different loci in gesture space and afterwards repeatedly points to these physical loci to establish an anaphoric relation. Thus, in the sense of Bühler's (1965 [1934]) semantic unification of deixis and anphora and Fillmore's (1982) inclusion of pragmatic factors, anaphora and deixis can be regarded as two extremes on a single continuum of 'pointing expressions', which can be expressed by both modalities. On the one end, deictic expressions and direct pointing gestures establish a connection to real world entities in the physical context, whereas on the other end, anaphoric expressions and metaphorical pointing gestures point towards abstract, linguistic referents. In between these two extremes, we find mixed forms that combine deictic and anaphoric functions. Furthermore, individual expressions, which are located in different positions on this continuum, can be combined in co-speech gesture interaction, as the example (8.15) and Figure 8.26 has illustrated.

11.2.2 Reference as a dynamic process

Reference is not a static relation between a linguistic form and a referent, but is dynamically constructed in communicative interaction. As Chapter 9.3.1 has shown, the form by which a referent is represented changes throughout discourse, both on a vocal and a gestural level. In KS newly

introduced referents are usually represented by nominal constructions accompanied by gestures of varying handshapes. However, as discourse unfolds, continuous referents are expressed by less linguistic material, i.e. reduced forms such as pronouns or even zero anaphora are used and the frequency of gestures accompanying such referents decreases.

In addition to the tendency to reduce vocal and gestural information about maintained referents, the KS reference system also allows referents to be foregrounded according to the communicative intent of the speaker. As illustrated in Chapter 9.3.2, structural strategies, such as repetition or dislocation, may serve to increase the accessibility of a referent. Even though in KS the individual strategies are not associated with certain patterns of gesture form or semantics, gestures may have a foregrounding effect as well, as the increased frequency of gestures accompanying e.g. dislocations has shown. The assignment of specific loci in gesture space to individual referents is a common gestural strategy to direct the addressee's attention to a referent. These catchments can keep a referent activated throughout discourse while in speech new information is uttered, as illustrated by Figures 9.15/9.16 and example (9.20). In a sense, catchments thus fulfil a similar function as anaphoric expressions, since they constitute a link to previously introduced linguistic information.

In KS spatial reference, the dynamics of multimodal reference marking are illustrated in the context-dependent choice of FoRs. Depending on the availability of shared cultural knowledge, KS speakers flexibly switch between an absolute and a relative FoR. Furthermore, the two FoRs are also dynamically applied in one and the same description, as Figure 8.19 illustrates. This variability suggests that in KS the use of a certain FoR is a context-dependent, dynamic process of ad hoc ascription, which illustrates the "rather porous boundaries" between FoRs (Pederson 2012: 2619). In person reference, the preference of KS speakers for recognition and association of referents dynamically interacts with the preference for minimisation. While initial reference to persons tends to be constructed out of multiple pieces of information that are juxtaposed in order to achieve recognition, several contextual and interpersonal circumstances may also lead to the choice of a single, reduced reference form. Furthermore, the successful interpretation of bare NPs and of zero pronominal subjects requires a dynamic interaction with contextual features. At the same time, reduplication and repetition of pronouns is commonly used to facilitate reference tracking and to foreground individual referents. Flexibility and the dynamic construction of person reference in interaction with the physical surroundings is further expressed by the common strategy of KS speakers to include interlocutors in their narrations. This spontaneous ad hoc ascription, in which concrete individuals are used to impersonate abstract referents, such as in Figure 9.17 and example (9.21), facilitates reference tracking and is further supported by pointing gestures and catchments. Finally, the use of variable viewpoints to express one and the same referent, as in example (9.3), illustrates that different senses are dynamically chosen to establish a referent.

Furthermore, a dynamic interaction not only characterises the relation between speech and gesture, but can also be found with regards to person and spatial reference. On a gestural level, similar gesture families have been identified for the two reference types. Gestures with the *IX* handshape tend to refer to individuated spatial and person referents, whereas the *claw* handshape is associated with abstraction in both reference types. Moreover, the *A-open* handshape combines spatial and person reference in metonymic pointing. The structure of this form of pointing exemplifies the dynamic interaction of both gesture and speech, and person and spatial reference. In example (8.7), the participant speaks about her daughter and adds a spatial reference in her pointing gesture (Figure 8.8), which is directed towards the location of the daughter's residence. Thus, in this example, the two modalities add two pieces of focal information – that the daughter is the participant's neighbour (speech), and that her residence is located in a certain direction (gesture). Furthermore, the gesture metonymically points towards a location which is associated with the daughter. This metonymic relation, a location associated with a person, is later resumed in speech, when the participant utters *Y. en pti pli o*, 'Y. [is] a little bit higher' (example (8.6) and Figure 8.7). However, it has to be noted that when this relation is first established in gesture, the location serves as a reference point for the target, the daughter. In the second occurrence of the metonymic relation in speech, the roles are reversed, i.e. the daughter is the reference point for the target location. A similar instance of the dynamic integration of person and space in multimodal reference is illustrated by example (9.5) and Figure 9.1. In speech, the participant uses a person's name as a reference point to refer to a location, i.e. the person's residence. This metonymic utterance is complemented by another metonymic relation expressed by a pointing gesture, which is directed towards the office of the person. Thus, this is a case of multiple metonymy in one utterance, i.e. a person standing for a location in speech, and another location standing for the same person in gesture.

11.2.3 A tripartite approach to reference

Bearing in mind the interactional patterns of person and spatial reference as well as of speech and gesture, a tripartite approach to reference is proposed (Figure 11.6 below). Following Hanks (1990), the first level of reference is constituted by the semantics of individual reference forms. In KS, this is established by the individual lexical fields of spatial and person reference, including names and toponyms, kinship terms and honorifics, as well as adverbial and demonstrative elements. Furthermore, functional items are also involved on this level, as the description of the KS pronominal system, number marking and bare NPs in Chapter 7.2 shows. Moreover, KS has also several gestural forms at its disposal to express spatial and person reference. The phonological features of these gestures, i.e. handshape, position, and quality, differ depending on the reference type (Chapter 7.3).

On a second level, the individual reference forms are mobilised in communicative interaction and are thus dynamically adapted and combined according to contextual and interactive factors. Gestural and vocal reference forms are temporally, semantically and semiotically intertwined. In spatial reference, KS speakers combine gestural and vocal information to express figure-ground relations. Furthermore, KS speakers variably select different strategies to locate a figure, i.e. different FoRs, according to context, availability of shared cultural knowledge, and the speaker's general communicative intent. In person reference, different preferences of initial person reference interact with each other. Moreover, the reduction of vocal information about individuals can be counterbalanced by contextual information as well as gestural information. Both physical and linguistic context guides the interpretation of reference forms and abstract referents can be substantiated by ad hoc references to interlocutors and a transfer from speech to a physical, visual expression in gesture. Other strategies of the dynamic mobilisation of vocal and gestural reference forms depend on discourse status, i.e. referential givenness. Furthermore, referents can also be foregrounded by several strategies of emphasis. Finally, catchments can keep individual referents active across sentence boundaries. Thus, reference is a dynamic process in which the gesture-speech ensemble interacts with contextual information and communicative intent.

Finally, on a third level, reference is embedded in a communicative ecology. Community-specific patterns of social structure and social interaction guide person reference by e.g. influencing the forms of address. Furthermore, shared cultural knowledge strongly affects the selection of reference forms and referencing strategies in both modalities. Moreover, sociocultural and sociohistorical factors are reflected in communicative interaction, resulting in an idiosyncratic habitus of a community's communicative behaviour. As a consequence, reference construction is not only an informative but also an interactive process, in which culturally shared systems of knowledge and symbols are put into practice, reflecting patterns of the communicative ecology.

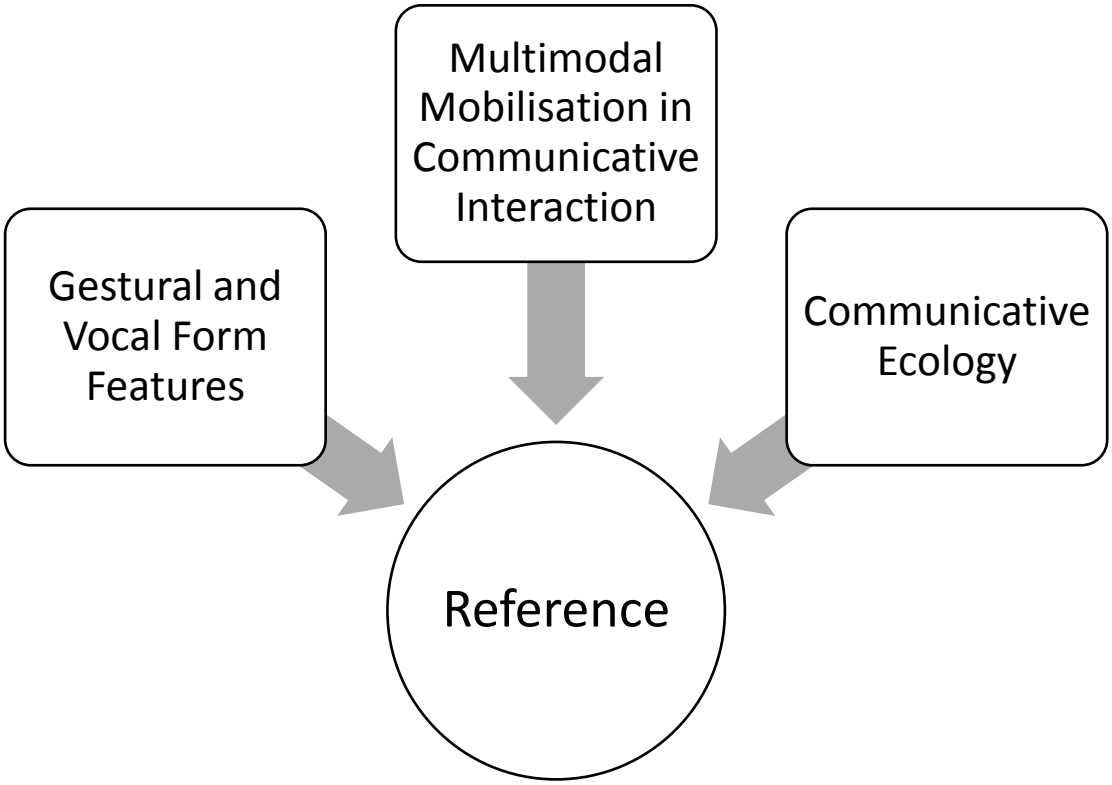


Figure 11.6: A tripartite approach to reference.

In sum, reference is not only a feature of language, but also a multimodal and culturally relevant process. As such, it is dynamic and context-dependent rather than static, and occurs in social and communicative interaction. Thus, the patterns of KS multimodal reference marking are in line with Kendon's (2004: 361) suggestion that

> […] language cannot be properly understood if it is regarded only as a system of abstract symbols governed by quasi-mathematical rules of operation that are sui generis remote from practical action. Language must be seen, rather, as embedded within, and as a part of, the action systems by which the environment and the objects within it are manipulated, modified, organized and created.

12 CONCLUSION

12.1 INTRODUCTION

Throughout this study it has been shown that KS reference is achieved through a dynamic and creative process in which modalities and referencing strategies are combined in an interactive fashion. Furthermore, not only the immediate context of the communicative interaction but also the micro-ecology of communication shape the application of referencing strategies. As such, the study has provided answers to all research questions and the results not only highlight the structures and dynamics of the KS reference system but also reveal several implications for co-speech gesture interaction and the nature of reference.

12.2 FORM FEATURES OF KS REFERENCE MARKING

Concerning the first research question proposed in Chapter 1, it can be said that KS has a number of linguistic expressions at its disposal to convey reference to individuals and locations. Most of these expressions have their origin in the lexifier language French, as does the majority of the KS lexicon. While in other domains, such as 'household', 'food' or 'the modern world', traces of Eastern Bantu languages, Malagasy and English can be found, this is not the case in person and spatial reference. The only exception is the occurrence of one form of address used for an aunt, which is derived from English 'auntie'. Further lexical items used for person reference, beside kinship terms, are honorifics and titles, as well as names and nicknames. Spatial reference can be conveyed by a number of prepositions and adverbs as well as toponyms. In contrast to lexical items, the KS functional system associated with spatial and person reference is rather reduced. The pronominal system is characterised by syncretism, with only the first and third person singular pronoun exhibiting different forms according to subject, object or possessive marking. Furthermore, the article system is reduced to such an extent that a bare NP can be considered the default form of a nominal, which can be interpreted as (in)definite, (non)specific and (non)individuated depending on contextual features or common ground. In cases in which the context does not suffice to result in a specific, definite or individuated interpretation, or if the speaker would like to emphasise such

a status, the demonstrative determiner *sa* is added. Similarly, number marking is not obligatory, but can be added in the form of *en* for singular and *bann* for plural number.

In addition to referential expressions in speech, KS speakers also use specific gestures to convey spatial or person reference. Both reference types are predominantly accompanied by gestures performed with the right hand and associated with the most frequent handshapes *5*, *B*, *IX*, and *claw*. However, the *A* handshape is more likely to convey spatial reference, whereas the *purse* handshape is associated with person reference. Furthermore, the KS gestures performed in spatial reference occur more often in the periphery and the extreme periphery, while person reference is expressed equally often in all subsections of gesture space. The majority of gestures accompanying both spatial and person reference are performed by arced, straight and circular movements, and to a lower frequency by wrist movements. Moreover, the most frequent quality of KS gestures is the intermediate case of M-quality, which means that very small or very large gestures can be considered a minority. Thus, the general perception of many participants that KS speakers generally use large gestures is a matter of position in gesture space rather than extensive movement across subsections. The prominence of the position of gesture articulation in KS is further supported by the finding that the two flat handshapes *B* and *5* as well as the *A* handshape are more often produced in the peripheral areas – a tendency that is more prominent in spatial than in person reference. The other handshapes, in contrast, are more likely to occur in the transition between centre and periphery.

In sum, referential items were identified for both modalities. On a gestural level, KS speakers tend to associated several phonological features with spatial or person reference. On a vocal level, KS has a repertoire of lexical expressions and functional categories available, with the latter exhibiting a certain degree of reduction as compared to the lexifier language French. This in turn suggests that in KS functions that are expressed by e.g. inflectional morphology in other languages are taken over by pragmatic factors of the individual communicative interaction instead.

12.3 The Mobilisation of Referential Forms in Communicative Interaction

12.3.1 KS reference in co-speech gesture interaction

KS gestures are in close temporal, semantic and semiotic relation with speech. On a temporal level, the majority of KS gestures are produced parallel to speech, following the notion of synchrony, which is generally assumed for co-speech gestures. Furthermore, there is a tendency of KS gestures to express redundant information rather than complementary information. However, as has been discussed in chapter 11, this redundancy does not imply that the gestures add nothing to the utterance. In contrast, they perform various additional functions such as providing an alternative representation, facilitating reference resolution and substantiating abstract concepts in a concrete, physical form. If in KS complementary information is conveyed by gestures, this occurs more often in spatial than in person reference. Finally, on a semiotic level, deictic gestures occur more often than iconic gestures in KS. Metonymic pointing occurs more often in person reference than in spatial reference, whereas iconic gestures are more often used to describe locations than individuals.

The co-expressiveness of gestures with speech is further illustrated by the distribution of figure and ground in KS. Ground information is frequently expressed by gestures, while information on the figure is more restricted to the vocal channel. Furthermore, KS speakers tend to express both figure and ground in speech, with the gestural component further substantiating the information on the ground. In person reference, an ambivalence of strategies could be found for speech, but not for gestures. As such, KS speakers switch between a reduction of referential expressions by e.g. bare nouns and null subjects and a certain overrepresentation of referents by means of reduplication and repetition. The finding that this ambivalence is not reflected in the gestural domain suggests that KS speakers to not perceive a counterbalance of these different strategies as necessary. In other words, bare nouns do not seem to constitute a lack of information to speakers, which is further supported by the fact that gesture rate and gesture type do not reflect (in)definiteness or (non)specificity of bare nouns. Neither are reduplications associated with overexplicit marking, which is reflected by the unchanged use of gestures in this context. A more straightforward reflection of the close intertwining of gestures and speech in person reference can be seen in the case of metaphorical pointing gestures. Combining the participants' interpretation of the metaphorical pointing videos with the occurrence of metaphorical pointing in locally-anchored narrations, it can be assumed that in KS this kind of pointing is only used in a close and semantically redundant relationship with speech.

12.3.2 Pragmatic factors and strategies of reference marking in KS

The proximity of both locations and individuals to the speaker influences not only the choice of referring expression but also the shape of gestures produced by KS speakers. In speech, the demonstrative adverbs *laba* and *la*/*isi* express a twofold distinction between proximal and distal referents. This is complemented by further adverbs such as *o bor*, *pre* and *lwen*, which cover intermediate distances. However, the use of these adverbs is very flexible and they express different degrees of proximity rather than clearly-cut categories. This graded notion of proximity is reflected in the KS gesture system, in which the relative position in gesture space indicates the distance of a referent: the further away a referent, the higher the gesture in gesture space. Furthermore, the conceptualisation of 'near' and 'far' is subject to individual and contextual interpretation, resulting in a very flexible use of expressive forms in both gesture and speech.

One factor that has been found to not only strongly influence the shape of gestures but also to further demonstrate the complementation of speech by gestures is the expression of spatial FoRs in KS. In locally-anchored narrations, the KS system of spatial reference is characterised by a split of strategies across modalities. In speech, the relative FoR is predominantly used, even though lexical expressions for cardinal directions are available in the vocabulary. In gesture, however, several features of an absolute FoR can be attested. KS gestures referring to existing locations in locally-anchored narrations exhibit a certain veracity of pointing, a typical distribution of handshapes, the independence of eye gaze, a lack of body torque, and the fusion of semiotic types – all of which is associated with an absolute FoR. However, further aspects that are typical for gestures produced within an absolute FoR, such as the combination of complex vectors in one gesture or the lack of metaphorical pointing, are not found in KS gestures. Furthermore, in other contexts, such as in the description of spatial arrays in stimulus pictures, KS speakers produced gestures commonly associated with a relative FoR. The flexibility with which KS speakers seem to switch between the two FoRs is further illustrated by the occurrence of cases in which both relative and absolute FoR were expressed shortly after each other within one discourse unit. Thus, the KS system of spatial reference can be best described as mixed, both within and across modalities, and flexible.

In KS person reference, the preferences for recognition and association play a more important role than the preferences for minimisation and circumspection. This is constituted by the frequent juxtaposition of multiple reference forms in speech, usually starting with a minimal description. The subsequent reference forms tend to be further descriptions in the form of relative clauses or other nominal constructions, which add further information about the referent. In many cases, these descriptions tend to be followed by a pronoun which stands in subject position of the following clause. This maximum effort to facilitate the recognition of the referent by the addressee is further complemented by the frequent

occurrence of possessive pronouns, relating the referent to the speaker. Furthermore, abstract or fictional discourse referents are often substantiated by recruiting an interlocutor as a stand-in protagonist, ideally accompanied by a pointing gesture or an interactive gesture towards them. However, depending on the mutually shared knowledge of the interlocutors, minimised forms, such as names, are also used, which illustrates that the speaker adapts the form of initial person reference to the specific audience.

As discourse unfolds, the representation of referents changes as well. Referential givenness, i.e. the discourse status of individual referents, influences the shape of reference in speech and gesture. Newly introduced referents are frequently accompanied by gestures, whereas maintained referents are expressed by reduced forms in speech and accompanied by fewer gestures. This general tendency to use reduced forms for maintained referents in speech is contrasted with the continuous use of reduplication of pronouns, which occurs most often in first person singular or plural, but also in the other parts of the KS person paradigm. Furthermore, emphasis of referents frequently results in a repetition of pronouns at the end of the clause, as well as in structural changes such as focalisation, topicalisation and dislocation. Especially dislocated referents are often accompanied by gestures, which causes additional emphasis. Moreover, even though the gesture rate decreases with increasing accessibility of referents, catchments are frequently used to refer back to a previously introduced referent. Importantly, catchments are also used in seemingly non-referential gestures, such as beats. As such, KS gestures can function to counterbalance the reduced representation of referents in speech and further help to clarify re-introduced referents.

In all instances of person and spatial reference, context plays an important role. Taking into account the linguistic context of the previous and the following discourse, for example, allows KS speakers to shift viewpoints in their description of a specific referent. In addition, extralinguistic context not only shapes the form of multimodal reference in KS but is also crucial for the addressee to successfully identify a referent. Generally shared knowledge guides reference, as the associations and implications associated with locations such as *anvil* and motion events illustrate. Furthermore, shared knowledge created within the individual discourse section plays an important role in KS reference. The high number of direct and metonymic pointing gestures anchor spatial references in the immediate surroundings, as does spontaneously produced ad hoc reference to individuals. The latter is further substantiated by the recruitment of interlocutors to embody abstract referents. The most striking part of extralinguistic context shaping multimodal reference in KS is the availability of shared cultural knowledge. KS speakers express their anchoredness in space by the use of absolute features in their gesture system. Furthermore, shared cultural knowledge about the social status of interlocutors has an impact on the selection of individual forms of address.

12.4 The Micro-Ecology of Seselwa Communication

Sociocultural and sociohistorical factors have been found to be reflected in the KS reference system. The prevailing notion of solidarity and the rootedness of KS speakers in family and society are reflected in the preference for association and recognition in initial person reference. Similarly, the rootedness in space, which is further facilitated by the geographical characteristics of Mahé, is directly visible in the use of FoRs in locally-anchored narrations. Moreover, everyday communication on the Seychelles is predominantly multilingual, since KS coexists with English and, to a lesser degree, with its lexifier language French. The fact that the Seselwa society is multilingual is reflected by the frequent occurrence of code-switching in colloquial speech. Furthermore, patterns of everyday life on the Seychelles, such as the predominance of outdoor activity, are also reflected in the gestures, most visibly in the use of gesture space.

Another striking feature of Seselwa society and culture is its colonial past. The circumstances during colonisation by the French and the British over a period of 200 years resulted in a mix on several levels. First, Seselwa society is characterised by a mix of ethnic heritage with traces from European, African, Malagasy and Indian descent. Second, this hybridity is also found in cultural domains such as music, food and of course language. However, instead of a mere juxtaposition of individual influences, Seselwa language and culture nowadays constitute a 'third kind', i.e. an idiosyncratic identity that has been created through merge, negotiation and transformation of the original components. As such, KS cannot be regarded as a mere mix of super- and substrate languages, but constitutes an independent language system that has not only incorporated influences from other languages but also developed its own idiosyncratic features. Similarly, KS speakers make use of a gesture system that is characterised by a distinctive use of gesture space and the presence of conventionalised interactive and emblematic gestures. Finally, the KS reference system reflects the notion of 'Creoleness' in that it is characterised by high variability, flexibility and creativeness, which further substantiates the view that reference is a dynamic process rather than a static relation.

12.5 Multimodality and a Tripartite Approach to Reference

The findings of reference construction in KS have direct implications for the interaction of gesture and speech. With regard to Kendon's extended continuum it has been shown that a further differentiation is necessary with regard to gesture types. Furthermore, pointing gestures form a very special category that is spread across the continuum, sometimes paralleling prototypical gesticulation and sometimes behaving more 'word-like'. Moreover, not only pointing gestures but also interactive and emblematic gestures can flexibly assume several positions in the individual continua, supporting Kendon's (2004) suggestion that these dimensions are working instruments rather than fixed categories. This is illustrated by the fact that in KS many iconic gestures also incorporate deictic features and that beats may contribute to referentiality by catchments as well.

Overall, KS multimodal communication has exemplified the close temporal, semantic and semiotic relation between gesture and speech. In this interaction, both modalities contribute to the construction of meaning and often exhibit a certain division of labour. Furthermore, the interaction is not merely a juxtaposition of the two modalities but characterised by complex structures, as the case of multimodal metonymy has illustrated. At the same time, the intertwining of gestures and speech is highly flexible, variable and context-dependent. Importantly, gestures are produced in interaction and shaped by the communicative intent of the speaker. The gestures produced by KS speakers reflect the interlocutors' knowledge and interactively construct reference in physical space. Furthermore, on an ethnographic level, gestures can also be embedded in an ecology of communication. In sum, this study has illustrated that gestures and speech are intertwined to form one functional unit, which is characterised by synchrony and co-expressiveness.

The close interaction of gestures and speech further suggests that reference is inherently multimodal as well. This becomes evident not only by the semantic association of vocal and gestural form features with specific referent types, but also in the interplay of both modalities and contextual factors. Factors of the communicative situation influence not only the selection of individual form features but also the expression of information across the modalities. Furthermore, abstract referential concepts conveyed in speech can be 'exbodied' and transformed into concrete, visual elements in gesture. Moreover, it has been shown that both modalities are able to convey not only exophoric but also endophoric information. This suggests that reference is not a static relation restricted to the semantic domain, but rather a dynamic process, i.e. reference is constructed in an interactive, communicative situation. Evidence for this view comes from gestural and vocal strategies that consider the knowledge

state of the interlocutors, as the impact of information structure on KS reference has shown. Furthermore, reference is constructed according to contextual factors and individual strategies are flexibly applied according to the circumstances of the communicative interaction.

These dynamics are also present in spatial and person reference, which are frequently combined in an interactive fashion. In metonymic pointing, locations can serve as a reference point to further describe individuals and vice versa. This is substantiated by the fact that many reference forms, both gestural and vocal, can be applied for both reference types. In addition, the close interaction suggests that individuals are not only anchored in social structures, but also often associated with certain locations.

In sum, a multimodal and tripartite system of reference construction is proposed. Reference to locations and individuals is constructed by a close interaction of both gesture and speech on three levels. First, on a semantic level, several reference forms are associated with individual reference types. Second, on a pragmatic and interactive level, these forms are dynamically mobilised in situated interaction, interacting with linguistic and extralinguistic context. Third, reference marking is embedded in an ecology of communication, in which sociocultural and sociohistorical factors are reflected in the individual strategies with which information about individuals and locations is conveyed.

Appendix I: Informed Consent Form[126]

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Informed Consent

Dear participants,

Thank you very much for taking the time to help. By signing this document you allow us to use your input for our work.
We are two doctoral students from the University of Cologne and are interested in linguistic aspects of Seselwa. Astrid Gabel would like to investigate aspects of sentence structure, while Melanie Brück would like to learn more about general communication strategies used by speakers of Kreol Seselwa.

(1) Please understand that,

a. You can withdraw your consent completely or in part anytime and without giving any reason.
b. You can disallow publication of particular statements, discussion of certain topics etc. anytime and independently from the general consent you are asked to give below.
c. We fully commit to honoring your contribution to the work appropriately.

Please choose which actions you would like to allow by circling the respective letter below.

(2) I give Melanie Brück and Astrid Gabel the right to:

a. Make audio-recordings during our session(s).
b. Make video-recordings during our session(s).
c. Use these recording as well as the form and content of anything I say during the session(s) for publications of the following kind, unless I state otherwise (see 1 b) above).
    i. Written publications.
    ii. Conference papers.
    iii. Teaching.

d. Store the recordings and related information with the Lenstiti Kreol Enternasyonal.

[126] Based on the informed consent form designed by K. Brandt, 2014.

e. Make the data available to other researchers for their projects. Those researchers will have to ask the Lenstiti Kreol Enternasyonal for permission first.

_____	_____
Location	Date
_____	_____
Name	Signed

Appendix II: Sociolinguistic Interview[127]

- *Ki laz ou annan?* (How old are you?)
- *Kote ou ti ne, kote ou grandi?* (Where were you born, where did you grow up?)
- *Kote ou reste?* (Where do you currently live?)
- *Ki louvraz ou (ti) fer?* (What is/was your profession?)
- *Ki pli o nivo ledikasyon ou'n konplete? Ziska kel az ou'n lekol?* (What is your educational level? Until what age did you go to school?)
- *Eski ou'n deza pas letan a letranzer*? (Have you spent some time abroad?)
- *Ki langaz ou ti koze dan lakour ler ou ti ankor zanfan? / pti pti?* (Which language(s) did you speak at home when you were a little child?)
- *Ki langaz ou ti aprann dan lekol?* (Which language(s) did you leanr in school?)
- *Ki langaz zot ti servi pour montre leson dan lekol lontan?* (Which language(s) were used in school as a medium of instruction?)
- *Ki langaz ou koze dan lakour konmela?* (Which language(s) do you speak at home nowadays?)
- *Ki langaz ou koze …* (Which language(s) do you use to speak …)
    - *Avek ou zanmi e ou vwazen* (with your friends and your neighbours)
    - *Avek ou zanfan* (with your children)
    - *Avek ou ser ek frer* (with your siblings)
    - *Avek ou paran* (with your parents)
    - *Avek ou granparan* (with your grandparents)
    - *Kot travay* (at work)
    - *Avek ou zannimo domestik* (with your pets)
    - *Dan laboutik* (in the shop)
    - *Dan ou rev* (in your dreams)
    - *Lo telefonn* (on the phone)
    - *Ler ou konte* (when you count)
    - *Ler ou zoure* (when you swear)
- *Dan ki langaz ou ekrir …* (In which language do you write …)
    - *Ou lalis konmisyon* (your shopping list)
    - *En let amikal* (an informal letter)
    - *En let ofisyel* (a formal letter)

[127] Based on Fleischmann (2008) and the questionnaire designed by K. Brandt, 2014.

Appendix III: Stimulus Sentences Metaphorical Pointing Task

1. *Anne ek Lisa pe zwe deor. Apre I sitan fatige ki i al dormi.*
   (Anne and Lisa are playing outside. Afterwards, she is so tired that she goes to sleep.)
2. *Peter i donn Zan en bannann.*
   (Peter gives Zan a banana.)
3. *Anne ek Lisa pe fer zot travay lakour. Letan i pe travay, remarke ki in bliy son liv kot lekol.*
   (Anne and Lisa are doing their homework. While she is working, she notices that she has forgotten her book at school.)
4. *Peter ek Zan pe al dan lakour. Toudenkou, i glise e tap son lipye.*
   (Peter and Zan are playing at home. Suddenly, he trips and hurts his leg.)
5. *Peter i aste en zouzou pour Zan. Kan i ouver bwat, i vwar poudir i vid.*
   (Peter buys a present for Zan. When he opens the box, he sees that it is empty.)
6. *Anne ek Lisa pe fer dezord.*
   (Anne and Lisa are making a mess.)
7. *Anne ek Lisa pe zwe kouk. Kan i anvi kasyet dan larmwar, me i remarke ki napa ase lespas.*
   (Anne and Lisa are playing hide and seek. When she wants to hide in the wardrobe, she notices that there is not enough space.)
8. *Anne ek Lisa pe vwayaz ansanm. Apre en pe letan, i remarke ki in bliy son pers dan lakour.*
   (Anne and Lisa are going on a tour. After a little while, she notices that she has forgotten her purse at home.)
9. *Peter ek Zan pe fer Pitza. Kan i mord en bout, i bril son lalang.*
   (Peter and Zan are making pizza. When he bites into his slice, he burns his tongue.)
10. *Anne ek Lisa pe vizit en laferm. Kan i war en lisyen i taye.*
    (Anne and Lisa are visiting a farm. When she sees a dog, she runs away.)
11. *Peter ek Zan pe get film. Kan i war en bebet lo lekran i zote.*
    (Peter and Zan are watching a movie. When he sees a monster on the screen, he jumps up.)
12. *Anne pe anmenn Lisa lo son ledo.*
    (Anne is carrying Lisa on her back.)
13. *Anne ek Lisa pe lir. Kan i fini lir son liv, i leve pour al rod en keksoz pour bwar.*

(Anne and Lisa are reading books. When she has finished her book, she gets up to get something to drink.)

14. *Peter ek Zan i swaf. Kan zot ganny en boutey delo, i bwar tou en sel kou.*

    (Peter and Zan are thirsty. When they get a bottle of water, he drinks it all at once.)

15. *Peter ek Zan pe al lekol. En sel kou i remark en trou dan son kannson.*

    (Peter and Zan are going to school. Suddenly, he notices that he has a hole in his trousers.)

16. *Peter ek Zan pe sot lo lili.*

    (Peter and Zan are jumping on the bed.)

Appendix IV: Metadata Sheet

Date

Session

Location

Interviewer (incl relationship)

Interviewee 1 (incl relationship)

Interviewee 2 (incl relationship)

Orientation of speaker(s) with regard to location

Geographic Information

Speaker orientation

Appendix V: Sociocultural Interview

- **Attitude towards Creole language**
    - How would you describe the attitude of KS speakers to their language?
    - Does/did the attitude change?
    - Is KS used in all situations?
    - Do you have the impression that the language changes?
    - How is mixing of KS with English or French perceived?
    - How would you describe the general attitude of KS speakers to literature written in KS?
- **Creole culture on the Seychelles**
    - What are typical Creole characteristics?
    - What role do other languages and cultures play?
    - What are typical Creole traditions?
- **Spatial reference**
    - What are the Seychelles? Is there a notion of unity or are the individual islands (culturally) autonomous?
    - What kind of relationship do people have with their environment and the different locations on Mahé?
    - Where do the names of the locations on Mahé come from?
        - Are there locations that have very creole names?
        - Are those locations special?
- **Person reference**
    - What kind of relationship does the individual have with the group?
        - How important are groups?
        - How important are individual needs/dreams/…?
    - What does it mean if a person is very creole?
- **Gesture**
    - Do you have the impression that KS speakers gesture a lot?
    - How would you describe the gestures?
    - Is there a prestige towards more/less gestures?
    - Do you know any gestures that are special to the Seychelles?

Appendix VI: Annotation Conventions

Annotation Level	Annotation Form	Description	Annotation Level	Annotation Form	Description
Speech Form	A	Adjective	Gesture Phase	ho	Hold
Speech Form	ADV	Adverb	Gesture Phase	prp	Preparation
Speech Form	DEM	Demonstrative	Gesture Phase	rec	Recovery
Speech Form	NAME	Name/Toponym	Gesture Phase	str	Stroke
Speech Form	P	Preposition	Referent Type	ref-per	Person reference
Speech Form	POSS	Possessive construction	Referent	ref-loc	Spatial reference
Speech Form	PRN	Pronoun	Referent	ref-misc	Misc reference
Speech Form	defDESCR	Definite description	G-S Relations	pre	Gesture starting before referent in speech
Speech Form	defDP	Definite nominal	G-S Relations	post	Gesture ending after referent in speech
Speech Form	indefDESCR	Indefinite description	G-S Relations	par	Gesture produced parallel to speech
Speech Form	indefDP	Indefinite nominal	G-S Relations	al	Gesture produced without speech
Speech Form	indiv	Individuated	G-S Relations	red	Gesture semantically redundant to speech
Speech Form	non-indiv	Non-individuated	G-S Relations	comp	Gesture complementing speech
Speech Form	spec	Specific	G-S Relations	contr	Gesture contradicting speech
Speech Form	non-spec	Non-specific	G-S Relations	repl	Gesture replacing speech

Annotation Level	Annotation Form	Description	Annotation Level	Annotation Form	Description
Information Structure	F1a-intro	Introduced referent	Proximity	F3-far	Far distance
Information Structure	F1a-maint	Maintained referent	Proximity	F3-int	Intermediate distance
Information Structure	F1a-reintro	Reintroduced referent	Proximity	F3-near	Near distance
Information Structure	F1b-focus	Sentence focus	Figure-Ground	F6-Ground	
F Information Structure	F1b-topic	Sentence topic	Figure-Ground	F6-Figure	
Emphasis	F1c-disloc	Dislocation	Gesture Form	See list of abbreviations	
Emphasis	F1c-foc	Focalisation	Gesture Function	See list of abbreviations	
Emphasis	F1c-pres	Presentative			
Emphasis	F1c-redup	Reduplication			
Emphasis	F1c-rep	Repetition			
Emphasis	F1c-top	Topicalisation			

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