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Spatial experience and temporal metaphors in Wolof: point of view, conceptual mapping, and linguistic practice

by

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Spatial experience and temporal metaphors in Wolof:
point of view, conceptual mapping, and linguistic practice

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by

Kevin Ezra Moore

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Wax, *toŋ-toŋ* *la,*
talk/conversation feast NONSUBJ.FOC.3

kenn *ku* *ne* *am* *nga* *ca* *wàll.*
anyone who be.located have you in.it share

'Conversation is a feast, everyone has the right to partake in it.'
(Wolof proverb. Cissé, Guèye, and Touré 1982:18.)

A minute can be long or short
An hour can be long or short
A lifetime can be long or short, but
Time is neither long nor short.

(For my uncle Ken Howard, and Helga)

Africa will never fade
Black skin on white bones
Mother of melody
Progenitor of rhythm
Cradle of humanity
Africa will never fade.

(For Alassane Paap Sow)

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Abbreviations and special symbols

.	Dots separate elements in a gloss that correspond to a single morpheme in Wolof; e.g., *ko* '3.OBJ' ("third-person object").
-	Hyphens separate elements in a gloss that correspond to Wolof morphemes that are also separated by hyphens; e.g., *ko-y* '3.OBJ-IMPF' ("third-person object imperfective").
:	Colons separate elements in a gloss that correspond to separate Wolof morphemes that are not separated on the data line; e.g., *koy* '3.OBJ:IMPF'.
^	Glottal stop
<>	Angled brackets enclose material that was not heard clearly in transcription.
?	The question mark is used to gloss a morpheme (realized as *a*) that I do not know the function of.
1	Numbers refer to grammatical persons; e.g., 1 = 'first person'.
ABL	Ablative
AFF	Affirmation
AND	Andative (indexes motion away from the location of the speech act)
ANT	Anterior (codes sequence and perfectivity)
ART	Article
AUX	An imperfective auxiliary, realized as *di* or *-y*. (Cf. Munro and Gaye 1997; see Robert 1991 for a somewhat different opinion).
BEN	Benefactive
CAUS	Causative
COMP	Complementizer
CONTIN	Continuative
DAT	Dative
DISCREF	Discourse referential demonstrative
DIST	Distal
DSTDEM	Distal demonstrative
EMPH	Emphasis
FOC	Focus
FUT	Future
GEN	Genitive (Third person possessor.)
GOA	Goal
HABIT	Habitual
HORT	Hortative

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IDEO	Ideophone. The Wolof category referred to here is technically called *coverb*. Coverbs, reminiscent of Japanese mimetic adverbs, intensify stative verbs in a way similar to how words like *very* and *absolutely* intensify adjectives in English.
IMPF	Imperfective (realized as *di/-y/d-*; this could be the same morpheme as AUX. *-y* is a left-leaning clitic.
IMPR	Imperative
LOCPREP	Locative preposition
MBA	Modified By Auxiliary; This marker (whose form is *a*) marks the fact that the verb which follows it is modified by an auxiliary. The auxiliary (which typically can also function as a content verb) precedes the *a*.
MID	Middle (Kemmer 1993); 'Middle passive' (*moyen passif*, Fal et al. 1990); 'Reflexive neutro-passive' (*réfléchi neutro-passif*, Ka 1981). The form is *-u/-ku*.
NEG	Negative. The negative suffix *-ul* has the variant *-ut*. Both of these have the allomorph *–u*.
NONSUBJ	Nonsubject
PRFCTVE	Perfective
PERF	Perfect
PL	Plural
PRON	Pronoun
PROX	Proximal
PROXDEM	Proximal demonstrative
PRSNTTV	Presentative (Similar to the English progressive)
PRTCLE	Particle
PD	Possessed
Q	Question word
RCPR	Reciprocal
REL	Relativizer (or 'relative' in *relative pronoun*)
SFOC	Sentence focus
SIML	Simultaneous
SUBJ	Subject (when no other conjugation is specified, the subject is in the "dependent [*dépendant*]" conjugation [cf. Fal, Santos, and Doneux 1990:25]. Munro and Gaye [1997:ix-x] term this conjugation [or "clitic class"] *minimal*. Robert 1991 terms this conjugation *narratif*. Cf. Ka 1994).
TE	The morpheme *te* in Japanese, a verb linker.
TOP	Topic
UL	Unmarked Locative
VAL	Valence-altering suffix
VEN	Ventive. (Indexes motion toward the location of the speech act.)

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A note on transcription

Examples are transcribed according to the official Senegalese transcription system (cf. Fal et al. 1990), with some minor exceptions. Phonetic values of the Senegalese symbols are listed below were they are not equivalent to the IPA symbols:

é = [e]; e = [ɛ]; ë = a high central vowel ("schwa"); a = a low central vowel; à = a more open and longer low central vowel; ó = [o]; o = a mid back rounded vowel ("open *o*"); ñ = a palatal nasal; j = a voiced palatal stop; y = [j]. Capital and lower case symbols have the same value. Geminates are indicated by doubling the symbol in question except for *q* which represents [q:]. In the case of long vowels, a single diacritic modifies both symbols. For example, óo represents [o:]. Word-final stops are devoiced.

A tilde "~" indicates nasalization on the following vowel.

The letter *h* is not ordinarily used in the Senegalese transcription system, but there is an epenthetic *h* in Saloum speech which I have included in some examples (cf. Gamble 1957).

In the Senegalese system, the presentative is transcribed as two words, whereas I transcribe it as one, as in the example below.

Senegalese system:

Maa ngiy *lekk gerte.*
1 PRESENTATIVE:IMPERFECTIVE eat peanut
'I am eating peanuts.'

The system employed in this dissertation:

Maangiy *lekk gerte*
1:PRESENTATIVE:IMPERFECTIVE eat peanut
'I am eating peanuts.'

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Spatial experience and temporal metaphors in Wolof: point of view, conceptual mapping, and linguistic practice

Introduction

This dissertation is about how people use language and concepts that are associated with what is immediate and perceivable to talk about what is less immediate and perceivable. This is a fundamental principle that organizes how people understand the meanings of words and grammatical constructions (Jackendoff 1983, 1990; C. Johnson 1999b, Lakoff 1987, Sweetser 1990). The dissertation concentrates on polysemy — cases in which a given word has more than one meaning. It focuses on temporal concepts in Wolof, a Niger-Congo language of Senegal and The Gambia, West Africa, and involves comparing Wolof with English. The crosslinguistic/crosscultural setting of the study allows valuable insights on language and cognition that are potentially valid for humans in general.

Concepts associated with certain types of experiences of space and motion that occur in day-to-day life systematically contribute structure to temporal concepts. Thus we find vocabulary associated with the relevant concepts of space and motion used to refer to the appropriate temporal concepts. The level of detail at which conceptual and lexical structure is similar in two unrelated languages — Wolof and English — is impressive. We shall also examine cases in which there is variation in semantic structure between the two languages. This variation is significant and non-arbitrary. The variation reminds us that an understanding of human linguistic and conceptual abilities depends on an understanding of how these are manifested in particular languages.

1.1. Commonalities and differences

Here is an example of a crosslinguistically common link between the semantics of motion and those of temporal phenomena. In many languages of the world, some of them unrelated and geographically separate, people use

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a word that means something like 'come' to talk about the occurrence or expected occurrence of a future time, as in the following examples. (The original data is given in italics with a gloss of each meaningful unit [morpheme] directly below it. Below that is an idiomatic translation in single quotes.)

English

*Christmas is **coming** (soon)*

Spanish

*La Noche Buena **viene** muy pronto*
the night good come.3 very soon
'Christmas Eve is **coming** very soon.'

Japanese

*haru ga **kita***
spring NOMINATIVE came
'Spring has **come**.'
[Hasegawa 1993:50]

Mandarin Chinese

***lai** ri*
come day 'days to **come**', 'future'

***lai** nian*
come year 'the **coming** year' 'next year' [Yu 1998:98]

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Yoruba

ọ̀sẹ̀ tí ó ´n ***bọ̀*** 'next week' [Lit: "week that is **coming**"]

ọdún tí ó ´n ***bọ̀*** 'next year' [Lit: "year that is **coming**"]
[Schleicher 1993:125][1]

Wolof

Tabaski mungiy ñów
Tabaski 3:PRSNTTV:IMPF come
'Tabaski is coming.' (Tabaski is a major holiday.)

That such diverse languages represent temporal experience in similar ways suggests that there is something universal about human experience that motivates such a strategy. The similarity between Wolof and English, as suggested by the example above, is quite extensive. In the next chapter, we will discuss how this linguistic similarity could be due to universal similarities in human experience.

But there are also significant differences between the metaphorical temporal expressions of Wolof and English. Take the following Wolof sentence for example. (After the Wolof data and morpheme-by-morpheme gloss, I provide an approximate literal translation in double quotes. I put single quotes around *found* to note that we have to be wary of that word as a translation of *fekk*.)

1) *Midi fekk na bool ba*
noon become.co-located.with PERF.1 bowl the.DIST
ca waañ wa
LOCPREP.DIST kitchen the.DIST
"Noon 'found' the bowl in the kitchen."
'The bowl was in the kitchen at noon.'

The Wolof in example 1 is stylistically ordinary, like the English translation *The bowl was in the kitchen at noon*. By contrast the quasi-literal

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English translation of the Wolof — *Noon found the bowl in the kitchen* — is stylistically highly unusual. I will argue in Chapter 2 that a crucial difference between Wolof and English in this case resides in the semantic structure of the Word *fekk* 'become co-located with'. Involved here are issues of the influence of word-meaning on how thought is packaged for speech (Slobin 1996), and the interaction of word-meaning and metaphor in the structure of thought.

1.2. Conceptual metaphor theory.

The analysis and description of phenomena such as the one we just looked at will be carried out using the conceptual metaphor theory of Lakoff and Johnson 1980, 1999; Lakoff and Turner 1989, Sweetser 1990, Turner 1991, Grady 1997a, and others. Conceptual metaphors are systematic correspondences between concepts in different conceptual Domains, which enable people to think and talk about one kind of experience in terms of another in systematic ways. These correspondences show up in *metaphorical expressions* like the ones with *ñów* 'come' or *fekk* 'become co-located with' that we have just been looking at. Metaphorical expressions are chunks of language in which vocabulary and grammatical constructions that are primarily associated with one kind of experience are used to talk about another. Conceptual metaphor is not restricted to literary or other artful uses. Rather it is pervasive in ordinary speech. For example, there is a metaphor that construes *knowing* or *understanding* as *seeing* (Baker 1999, C. Johnson 1999b, Lakoff and Johnson 1980, 1999; Sweetser 1987, 1990). The examples given below show a systematic correspondence between two kinds of experience: one of *seeing*, involving the eyes, and the other of *intellection*, not necessarily involving the eyes. The examples also show similarity between Wolof and English.

2) a. *Gis naa li nga wax.*
see PERF.1 REL 2.SUBJ say
"I have seen what you said."
'I see what you said'; 'I understand what you said.'
Cf. English *I see what you mean.*
[AK, 091999]

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b. *Gis na dëgg daal.*
see PERF.3 truth AFF
'He saw the truth'; 'He saw reality.'
[att.] [AK, 091999]

c. *Li nga wax leer na ma nàññ.*
REL 2.SUBJ say clear PERF.3 1.OBJ IDEO
'What you said is very clear to me.' (= 'I understand very well.'
The ideophone *nàññ* is a special word that modifies the idea of brightness.)
[AK, 091999]

d. ... *Kooku de des na leer* ...
DISCREF EMPH be.missing PERF.3 clear
"... That is less than clear..." (The Wolof expression, like its English translation, says that the speaker does not understand.)
[att.] [d K, Xi:127]

The systematicity of the correspondences between kinds of experience is significant: Seeing systematically corresponds to knowing; *not* seeing corresponds to not knowing. Furthermore, the correspondences are not limited to words that mean 'see'. Words that mean 'clear' predictably mean 'understandable', since clarity aids vision. Similarly, words that denote conditions in which vision is impeded can be used to talk about situations in which understanding is difficult, as in *That's an opaque argument.*

In conceptual metaphor theory, the conceptual Domain that supplies vocabulary and inferential structure in a metaphor is called the Source Domain. Source-Domain concepts, for example *seeing*, typically have to do with aspects of experience that are immediate and perceivable, and therefore intersubjectively available (Grady 1997a, C. Johnson 1999b, Lakoff and Johnson 1999; Sweetser 1990 etc). In a metaphor, the conceptual Domain that contains the concepts which are construed in terms of Source-Domain concepts is called the Target Domain. (Cf. Table 1.1 below). Source-Domain concepts are said to *map onto* Target-Domain concepts. For example, the first correspondence in the table below is read as "The person who sees maps onto the person who understands." This means that the person who understands

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is thought about to some extent as if she[2] were a person who sees. The table as a whole characterizes the KNOWING AS SEEING metaphor. The metaphor is named for convenience in capital letters in the format TARGET AS SOURCE (or TARGET IS SOURCE), which can be thought of as "TARGET is metaphorically construed AS SOURCE." The entire correspondence between experience types is called a mapping, and the individual correspondences such as each of those in the table below are also called mappings.

Table 1.1: The KNOWING/UNDERSTANDING AS SEEING metaphor

SOURCE DOMAIN		TARGET DOMAIN
Person who sees	→	Person who understands
Thing seen	→	Thing understood
Aids to seeing	→	Aids to understanding
Impediments to seeing	→	Impediments to understanding

I am using the word *Domain* in a special sense in order to identify the roles of concepts in metaphorical mappings, as represented, for example by the phrases in tables like 1.1. A Domain is a coherent area of conceptual structure; intuitively, a *kind* of concept, such as a spatial concept or a temporal concept. When a metaphor is said to map conceptual structure *from one Domain to another*, what is meant is that one kind of concept with a certain characteristic structure is understood partially in terms of another kind of concept with different structural characteristics (cf. Lakoff and Johnson 1980). I do not intend any particular general analysis of conceptual material into domains such as those of Croft 1993 or Langacker 1987.

Domains as I (and others) understand them have properties that are not associated with the ordinary meaning of the word *domain*, hence my capitalization of the word in its technical use. First, a single experience may typically involve more than one conceptual Domain. For example, if I say *Let's see what's in that box*, I mean both 'Let's *perceive* what's in that box *with our eyes*' (a Domain of vision) and 'Let's *find out* what's in that box' (a mental Domain) (C. Johnson 1999a,b; cf. Sweetser 1990). Second, one conceptual Domain may include another (as a "proper subset"). For example, all events in the Domain of *motion* are also events in the Domain of *time* (though, of course, the reverse is not true).

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The following two essential characteristics of correlation-based metaphors (Grady 1997a, 1999b) are consistently noted by students of conceptual metaphor.

Inferences are mapped from Source-Domain concept to Target-Domain concept. For example, in the Source Domain, if a light is bright, it is good for making things visible. In the Target Domain, if an idea is bright, it is good for making things understandable. That is, since seeing maps onto understanding, something that helps you see maps onto something that helps you understand. By the same token, if something is hard to see, it is hard to understand, as in a *murky discussion.*

The mapping is *unidirectional*: the vocabulary of vision, for example, is used to talk about mental experience, but the vocabulary of mental experience is not used to talk about vision. Thus, I can say *I see what you mean* to mean 'I know what you mean' but not *I know the teacher's socks* to mean 'I see the teacher's socks.'

Conceptual metaphor theory gives us a good descriptive mechanism for talking about crosslinguistic polysemy patterns. Although this dissertation deals primarily with Wolof, and with English for purposes of comparison, the patterns we will be dealing with appear to be quite widespread crosslinguistically (cf. Grady 1999a,b; Taub 1998 on Uighur). Yu 1998, for example, shows detailed similarities between the metaphor systems of Mandarin Chinese and English.

One aim of this work is to demonstrate the utility of conceptual metaphor theory (Lakoff and Johnson 1980, 1999) for crosslinguistic-lexical semantic and grammatical description (cf. Goldberg 1995, Yu 1998). This is part of a growing understanding that metaphor is not a mere stylistic device, but a cognitive ability that is of central importance to language. The dissertation thus contributes to a trend in linguistics in which language is analyzed increasingly in terms of meaningful cognitive and linguistic structures, how people function in the world, and how language is used in communication (Fillmore 1982a, Givón 1995, 1999; Hanks 1990, Lakoff 1987, Langacker 1987, 1991, Vandeloise 1991.)

In a sense, the question driving this dissertation is a simple one asked by Sweetser (1990:18), "...what makes space a good source domain for time

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vocabulary...?" Or: what is it about the ways people understand their experiences in space that they apply to understanding temporal experience? In order to approach this question I have chosen to mostly concentrate on open-class, as opposed to grammatical, linguistic forms (and, more specifically, on word meanings). The reason for this is that when metaphor is found in grammaticalization it is often accompanied by other, additional, semantic relationships which may complicate the study of the metaphor involved.

Both spatial and temporal language inevitably reflect the need to locate events and entities relative to the "here and now" of the speaker and addressee, as well as to other times and entities. In examining the relationships between the semantics of motion and location on the one hand, and temporal phenomena on the other, it is impossible to ignore the role of viewpoint in structuring human understanding of spatial and temporal experiences. Thus, a recurring theme throughout the dissertation involves point of view and the linguistic phenomenon of *deixis* (Ariel 1998, Banfield 1982, Bickel 1997, Bühler 1990/1934, Fillmore 1976, 1982b etc; Hanks 1990 etc, Levinson 1983, Lyons 1977, etc). *Deictic* expressions are expressions that depend for their interpretation on knowledge of the situation in which they are uttered. (I use the word *situation* to refer to the extralinguistic state of affairs in which a speech act is embedded.) For example, the word *here* is classified as deictic because it refers to whatever place the word *here* is used at, and the word *tomorrow* is deictic because it refers to the day after the day on which the word is used. Thus, if you found a note in a bottle floating at sea which said "Meet me here tomorrow," you would not be able to decide when or where the writer of the note wanted you to meet her because you would not be able to determine the reference of the words *here* and *tomorrow* (Fillmore 1997/1971).

In the Wolof sentences in 3 below, the different meanings of FRONT and BACK have to do with different ways point of view is associated with metaphor and lexicon. Notice that the Wolof word for BACK has two temporal meanings but the word for FRONT has only one. Interpretation (i) of *gannaaw* 'back' in 3a is symmetrical with the meaning of *kanam* 'front' in 3b: BACK corresponds to 'past' and FRONT corresponds to 'future' — I.e., these

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metaphorical senses FRONT and BACK are understood relative to the "now" of the speech act.

3) a. *Ci* *gannaaw* *la* *ñów.*
LOCPREP back/behind NONSUBJ.FOC.3 come
"At back she came."
i) 'She came a while ago.'
ii) 'She came afterwards.'

b. *Mungi* *ñów* *ci* *kanam.*
3:PRSNTTV come LOCPREP face/front/ahead
"She's coming at front."
'She's coming in a while (from now).' I.e., 'She's coming in the future.' (This is complementary to interpretation (i) of 3a. There is no "beforehand" sense that would be complementary to interpretation (ii) of 3a.)

But notice that *gannaaw* 'back' has another meaning, one that is not symmetrical to *kanam* 'front'. In this use, *gannaaw* means something like 'after'. In Chapter 4 we will see that there are two different metaphorical understandings of temporal experience that motivate the two temporal meanings of *gannaaw* 'back' and the lack of symmetry with *kanam* 'front'. What is intriguing is the story of how two different manifestations of the notion BACK and two different experiential correlations motivate different metaphorical mappings, and explain an initially puzzling asymmetry in meaning (cf. Lindner 1982).

Moreover, it turns out that in order to understand the temporal uses of *gannaaw* 'back', we need a theory of *linguistic practice*; that is, a theory of how language is used in acts of communication (Bickel to appear, Hanks 1990, 1996a). Thus, conceptual metaphor is not *only* a matter of mappings between concepts, but is also very much a matter of language and how it is used.

1.3. Organization of the dissertation

Now that we have a feel for the kinds of specific issues we will be discussing, let us have a look at the overall organization of the dissertation.

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For the most part, each chapter deals with a different set of Wolof words and the issues of lexical structure, metaphor structure, and conceptual structure they bring up.

Chapter 2 deals with the temporal meanings of *ñów* 'come', *fekk* 'become co-located with', and the contrasts between the two. A central issue is the effect of lexical structure and habitual language use on metaphor. A major contrast that comes up is one between point-of-view based and point-of-view neutral temporal metaphor, exemplified here by the uses of deictic *ñów* and non-deictic *fekk*.

Chapter 3 deals mostly with words for FRONT and BACK/BEHIND in Wolof and Japanese, and two opposing metaphors they participate in, one of which is point of view based while the other is point-of-view neutral. This discussion has important ramifications for theories of grammaticalization and the meanings of FRONT and BACK temporal terms crosslinguistically. Far from being a mere ornament of peripheral interest to linguistic structure, metaphor is a fundamental factor in lexical organization and interacts in important ways with grammar. The findings of Chapter 3 are also relevant to the philosophical debate regarding *tensed* vs. *tenseless* theories of time (Le Poidevin 1998, Le Poidevin and MacBeath 1993, Oaklander and Smith 1994).

Chapter 4 deals with the temporal meaning of *gannaaw* 'back' in Wolof that is not symmetrical with the temporal meaning of *kanam* 'front', discussed briefly at the end of the preceding section. We will discuss how this fits in with the issues involving FRONT/BACK words and point of view discussed in Chapter 3.

Chapter 5 discusses two kinds of conceptual and linguistic variability which are relevant to the analyses in the earlier chapters. First, a given individual may have different ways of conceptualizing a given spatial or temporal relationship. Second, conceptual strategies may vary from language to language or from speaker to speaker.

Chapter 6 is a survey of most of the temporal metaphors in Wolof whose Source-Domain concepts involve motion or location. It is placed late in the dissertation in order to take advantage of the understandings we will have built up of the issues of day-to-day experience, lexicon, and metaphor structure that we encounter in chapters 2-4.

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Chapter 7 examines the content verb *jot* 'reach', which is extremely common in temporal use, with a meaning similar in many ways to the temporal meaning of *ñów* 'come', as in the following example.

4) *Bu weerukoor jotee/ñówee —*
when Ramadan reach:ANT/come:ANT
benn la.
one NONSUBJ.FOC.3
'When Ramadan reaches/comes — it's the same.' (That is, the *jot* version and the *ñów* version both mean the same thing, something like 'when Ramadan comes'; i.e., "when the current month is Ramadan.")
[s T, Xi:92]

We will compare *jot* 'reach' and *ñów* 'come' with the aim of finding out how *jot* differs from *ñów* and what makes *jot* particularly appropriate for temporal use. Various considerations, including *jot*'s rich polysemy structure, suggest that there is significantly more to the story of the temporal meaning of *jot* than a metaphorical mapping.

Chapter 8, the final chapter of the body of the dissertation, is concerned with the noun *jot*, which translates into English as 'time' in the sense of 'having time'. It turns out that the English notion of *having time* and the Wolof notion of "having *jot*" are not the same. While English treats *time* as an external resource — as something that one can not only *have*, but also *waste*, *spend*, or *budget* (Lakoff and Johnson 1980, 1999) — the metaphorical structure of the noun *jot* 'time' is fundamentally different. The investigation of this question makes the important point that speakers of different languages do not necessarily have the same concepts (Sapir 1949, Slobin 1999, Whorf 1956). Thus in order to have a theory of human cognition we must have descriptions of the concepts of speakers of various languages.

Chapter 9 concludes the dissertation with a final discussion of conceptual metaphor, grammar, philosophical issues, the effect of lexicon on metaphor, culture-specific construals and meaning in human language, and crosslinguistic commonalities. Although linguistic and cognitive strategies

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vary radically across languages, and specifically between Wolof and English, they are also profoundly alike.

1.4. A note on the Wolof data.

The Wolof data in this study come from three major Sources. One is Mr. A. Kawkaw, a native speaker of Wolof from Baol, a rural region in northern Senegal, who has also lived in Dakar, the capital of Senegal, and has native-like competency in French and English. He currently resides in the United States. He is identified under the examples as AK.[3] The notation *[att.]* under an example means that the example was attested in actual use rather than elicited. In the brackets with the identification of the source of the example, I also include coordinates that enable me to find the place where I originally documented the example.

A major source of data is fieldwork that I did in rural Senegal and in Dakar in late 1997 and early 1998. The rural work was done with monolingual speakers of Wolof in a community of about a thousand people in Saloum, southeast of Dakar, called Tuubaa Morit. It is important to have the data from monolingual speakers because we can be confident that these speakers have not taken conceptual structures that they learned in a European language and expressed them in Wolof. Tuubaa Morit was an agricultural community with no electricity (except for batteries) or running water. There was radio but no television. No European languages were in use as media of communication there, and the first French-language school had been built there only in 1995. (French is the major European language spoken in Senegal.) I believe that there were only two or three French speakers in the community when I was there. Wolof was the principle language spoken in Tuubaa Morit and all of my consultants there were monolingual speakers of Wolof. They are identified by initials in the data that stand for pseudonyms, preceded by an *s* for *Saloum* in the case of men and boys, or *sf* in the case of women and girls. Consultants from Dakar are identified with pseudonymic initials preceded by

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a *d* (for males) or *df* (for females). The third source of data is published texts, which are also identified in square brackets under the examples.

A small amount of data was gathered in a rural community in Baol, north of Dakar. This community is noted by the initials DFS.

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Notes.

[1] In the Yoruba transcription, underlined vowels are lower than the corresponding IPA value of that vowel; for example ẹ is "epsilon." Acute accent signifies high tone, grave signifies low tone, and mid tone is unmarked. An accent written before a nasal is intended to mark the nasal.
[2] I use feminine third person singular pronouns where the gender of the referent is unknown. If there is more than one such referent, the first will be feminine, the second masculine, (and so on).
[3] *Kawkaw* is a pseudonym. When not being used as a pseudonym, it is spelled *kaw-kaw* or *kow-kow* and means 'person from the country' (as opposed to the city).

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2

The Moving Time metaphor in Wolof and English: languages, point of view, and universal human experience

2.1. Introduction: the Moving Time metaphor.

Wolof and English structure meaning in very similar ways, based on possibly universal aspects of human experience. Exploring relationships between experience and linguistic meaning will shed new light on how metonymy is related to metaphor. We will also see a related area of meaning that the two languages structure differently, despite presumably common experience. In this context we will see that in order to compare metaphors crosslinguistically we have to do careful analysis of the Source-Domain lexemes involved. This is because conceptual metaphor depends crucially on Source-Domain lexical framings.

An overriding theme in the chapter is the importance of *point of view* in linguistic meaning. We will begin with a case of extreme similarity between Wolof and English.

In section 1.1 we saw that various unrelated languages use a word for COME to talk about the occurrence or expected occurrence of a time. In the current section we will focus on temporal uses of the Wolof word *ñów* and its English translation 'come' as in 1a-b below (repeated from section 1.1).

1) a. *Tabaski mungiy ñów*
Tabaski 3:PRSNTTV:IMPF[1] come
'Tabaski is coming.' (Tabaski is a major holiday.)

b. *Christmas is coming.*

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The above expressions instantiate a metaphor in which a distal moving entity maps onto a future time. The entity's movement toward the location of the speech act maps onto the time's becoming increasingly immanent. In fact, a whole motion scenario is involved in the metaphor. This scenario involves an entity that moves toward the location of the speech act, arrives there, and then keeps going, as exemplified below with examples that denote physical motion, paired with examples that denote metaphorical motion.

1) c. *Grandma is coming.*

d. *Summer is coming*

d. *Grandma has arrived.*

e. *Summer has arrived*

f. *The bus has gone by already.*

g. *Summer has gone by already.*

The arrival maps onto the occurrence of the time, and an entity that has *gone by* (*passed*) maps onto a time that is in the past. (*Passed* and *past* are etymologically related). The metaphor is called Moving Time (Clark 1973, Fillmore 1997/1971, Lakoff and Johnson 1980, 1999; Traugott 1975). Note that the temporal meanings of the words involved in the instantiation of the metaphor follow a consistent pattern of inferences. This is what provides evidence for conceptual mapping. This mapping is summarized in Table 2.1 below, and is followed by further exemplification.

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In describing the semantics of conceptual metaphors I will often have occasion to make reference to a role played by a person who is experiencing some spatial or temporal phenomenon. I call the person in this role *Ego*. Thus for example, in the first term of the mapping below, Ego is the person who experiences an entity moving toward her in the Source Domain or a time in her future in the Target Domain.

Table 2.1: The Moving Time metaphor

SOURCE DOMAIN		TARGET DOMAIN
An entity moving toward Ego.	→	A time in Ego's future.
Location of the entity.	→	Ego's future.
Ego's location.	→	Ego's present.
Arrival of the entity.	→	Occurrence of a time.
Co-location.	→	Simultaneity.
An entity moving away from Ego.	→	A point or period of time in Ego's past.
Location of the entity moving away from Ego.	→	Ego's past.
Change in degree of proximity.	→	Change in degree of immediacy.

The Wolof data with words for 'come' from Chapter 1 is repeated below along with additional evidence for the Moving Time metaphor involving lexemes meaning 'arrive', 'get close', 'approach', 'go beyond', 'continue on one's way' and 'get past'. Many of the English glosses of the Wolof examples also instantiate the Moving Time metaphor.

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1) h. *Noor* *ñów* *na* *léegi*

dry.season come PERF.3 now

"The dry season has come now." 'The dry season is here.'

[att.] [s R, Lu:144]

i. *Summer is here.*

j. *... Waaye luy* *dikk la,* *luy* *ñów*

but REL:IMPF come NONSUBJ.FOC.3 REL:IMPF come

la. *Dana agsi* *enʃaalla.*

NONSUBJ.FOC.3 FUT.3 arrive:VEN God.willing

"... but it's something that is coming, it's something that is coming. It'll arrive God willing."

(Talking about certain events predicted to occur in the Qur'an.)

[s T, Xi:42].

k. *dimaas* *bii* *di* *ñów*

Sunday this IMPF come

'this coming Sunday' 'next Sunday'

[AK, 091999]

l. *Timis jegesi* *na.*

dusk be.close:VEN PERF.3

"Dusk has become close."

'It's just about dusk.'

[s XW, Ba:67]

m. *Dusk is getting close.*

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n. *Koor* *jubsi* *na*
Ramadan approach:VEN PERF.3
'It's almost Ramadan.'
[df TR, Ba:128]

o. *Thanksgiving is approaching.*

p. *Bu* *tamxarit* <*bi*> {*paasee/weesoo/jàllee/*
when Tamxarit <the> {go.beyond:ANT/go.beyond:ANT/get.past:ANT/
wéyee} *nga* *duggu* *diggi.*
continue.on.it's.way:ANT} you enter:MID Diggi.
"When (the) Tamxarit {goes beyond/gets past/continues on its way}
you enter Diggi." [*Tamxarit* and *Diggi* are months.]
'When Tamxarit has passed, you enter Diggi.'
[s XW, Xi:120]

2.2. Experiential grounding.

The similarity between Wolof and English Moving Time expressions is quite remarkable, given that the English and Wolof languages and cultures are not necessarily similar in other respects. As we saw in Chapter 1 the Moving Time metaphor is common enough across languages that the similarity between Wolof and English is unlikely to be a coincidence (cf. Grady 1999b). What accounts for the similarity?

The answer has to do with *experiential grounding* (or experiential *basis* or *motivation*), which has been a central part of conceptual metaphor theory since Lakoff and Johnson 1980. The basic idea is that metaphors are grounded in experiences that instantiate their Source-Domain and Target-Domain concepts both at once; that is, experiences in which Source-Domain and

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Target-Domain concepts are saliently and regularly *correlated*. To take an example of experiential grounding with the KNOWING AS SEEING metaphor, seeing something and knowing about it are regularly correlated in experience. Much of what we know about the world we learn through seeing. And, in particular, although *knowing* does not necessarily correlate with *seeing*, *seeing* does normally and saliently bring about *knowledge*, so it is a unidirectional correlation (C. Johnson 1999a,b; Sweetser 1990).

Moreover, *seeing* is well suited to be a Source-Domain concept because it has to do with physical perception, which is relatively easy to understand and delineate. *Knowing* is less easy to observe and think about on its own. It is therefore natural for people to develop conceptual mappings that allow them to talk and think about knowing in terms of seeing (Grady 1997a, Johnson 1999a,b; Lakoff and Johnson 1980, 1999; Sweetser 1990). The similarities that we observe between Wolof and English metaphorical expressions are likely to be due to types of experiences that Wolof speakers and English speakers share, and metaphorical mappings based on these shared experience-types. In order to see why this is plausible but probably not the whole story, let us look in a little more detail at the notion of experiential grounding.

In recent work, Joseph Grady (1997a) has shown the value of specifying explicitly the links between groundings, metaphorical mappings, and the data that the mappings predict. The current dissertation relies heavily on Grady's work and seeks to demonstrate the utility of the approach to metaphor analysis that he advocates.

Work in conceptual metaphor theory has tended to focus on the importance of conceptual mappings and treat linguistic phenomena as resulting from them. Drawing on the work of Christopher Johnson, I will consider the possibility that specifically linguistic factors, including language

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use, play a role in the grounding of conceptual metaphor and the emergence of metaphorical expressions.

In a 1997 paper (published as 1999a), C. Johnson discusses the acquisition by children of multiple senses of the word *see* (cf. C. Johnson 1999b). Johnson discusses utterances like *Can you see what's in here?* in which an adult indicates to a child the little window on a tape-recorder. Such utterances have two different but mutually compatible interpretations corresponding to 'Can you perceive the thing that's in here with your eyes?' and 'Can you identify the thing that's in here?' Thus when people talk about *seeing*, they are often also talking about *knowing*. (Cf. Emanatian 1992, Norvig 1988 on *combined simultaneous interpretation*.) This phenomenon is related to *context induced reinterpretation* as studied by Elizabeth Traugott (Traugott 1985b, 1986, 1988, 1989 etc).

C. Johnson (1999a) emphasizes the role of language *use* in an account of children's acquisition of polysemy. That account of acquisition is offered as an alternative to one that relies solely on metaphor. The account is, however, compatible with what conceptual metaphor theory has to say regarding metaphor in the adult conceptual system (cf. Lakoff and Johnson 1999). I will not deal with child language, or discuss Johnson's specific hypothesis, but rather try to adapt his ideas and those of Traugott to the synchronic study of metaphor in adult language.

Examples like C. Johnson's *Can you see what's in here?* show that there is an *indexical* relationship between seeing and knowing. (Indexicality is inherent in the idea of experiential correlation, cf. Lakoff and Johnson 1980). An indexical relationship is a relationship between two entities which exist or occur together, where one entity potentially signifies the other in some way by virtue of being part of the same experience or event. Examples of indexical relationships include the following: the relationship between a bullet-hole and a bullet, a regional accent and a person whose origins are in that region, an utterance of the word *here* and the place in which it is uttered, or an

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author and a book written by that author (cf. Hanks 1996a:46, Nunberg 1978, Peirce 1955:107).

The indexical relationship between aspects of an experience like one that involves seeing and knowing allows one concept (e.g. *knowing*) to be referred to metonymically by an act of naming the other (e.g. *seeing*) (C. Johnson 1999a). *Metonymy* is a conceptual mapping that allows a given entity to be referred to by the naming of another entity with which it is associated in experience; for example *Room 101 is the second door on the left* (part for whole); *Plato is on the top shelf* (author for book). Cf. Fauconnier 1994/1985, Lakoff and Johnson 1980, Chapter 8. Metonymy and associated inferences have been identified as playing an important role in diachronic meaning change by Heine, Claudi, and Hünnemeyer (1991a,b); Hopper and Traugott (1993), Stern (1931), Traugott (1985b, 1988 etc.), and Traugott and König (1991). The phenomena of synchronic polysemy and diachronic change are closely related, since a change from one meaning to another involves an intermediate stage where both meanings are present in the language (Heine, Claudi, and Hünnemeyer 1991a, Hopper and Traugott 1993; Traugott 1986, 1988, 1989; Traugott and König 1991, Sweetser 1988).

An example of a seeing/knowing metonymy would occur if I said *I see a problem* upon perceiving a certain state of affairs with my eyes and recognizing in it a potential for trouble (i.e., I have come to *know* that it is a problem). The same sentence could be used metaphorically in a context in which it referred to mental recognition of a problem which was not inferred from visual input. Metonymic uses of language such as the one just exemplified with *see* are important to the study of metaphor in two ways: i) they are evidence of a salient correlation in experience between Source-Domain and Target-Domain concepts, ii) they make it obvious to members of the speech community that other members are aware of a particular correlation and set a precedent for using the Source-Domain vocabulary to talk about the Target-Domain concept. (Cf. Bybee, Perkins, and Pagliuca 1994;

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Clark 1996a,b; Hopper and Traugott 1993; Traugott 1985a,b; Traugott and König 1991; Heine, Claudi, and Hünnemeyer 1991b.)

Spatial and temporal concepts occur together in experience in the same kinds of ways as seeing and knowing occur together in the case just discussed. Crucially, any experience of motion is also an experience of time, although not all temporal experience involves motion — as in the case of seeing and knowing, the inferential relationship between concepts of motion and temporal concepts is unidirectional. This sort of inferential structure is characteristic of the metonymies we observe in the scenarios in which conceptual metaphors are experientially grounded. Thus it is possible to use the vocabulary of space and motion in order to metonymically refer to a temporal concept. For example, *Grandma is coming,* which refers to an event that is occurring in the present, can be understood as also making a claim about the future, the claim that Grandma will arrive. This sort of meaning transfer has been emphasized in the work of Bybee, Perkins, and Pagliuca and of Traugott cited above.

A plausible experiential grounding for the Moving Time metaphor involves correlations in experience and language use such as those we have been discussing (cf. Lakoff and Johnson 1980, 1999). The experiential grounding involves the following *grounding scenario,* which is very similar to what Grady (1997a), and Grady and C. Johnson (1997), call a *primary scene.*[2] The grounding scenario involves a (Source-Domain) motion event-type whose (Target-Domain) temporal dimension is salient. While the grounding scenario is primarily conceived of as a motion event, it is also not only an instance of, but also a good example of, the Target-Domain scenario, which is a temporal event-type that lacks a spatial dimension. Metaphor emerges when aspects of an understanding of the grounding scenario are mapped onto the Target-Domain scenario. Specifically, this involves mapping Source-Domain motion concepts onto Target-Domain temporal concepts, as in Table 2.1 above and Table 2.2 below.

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Motion Toward Ego (grounding scenario for Moving Time)

Ego sees an entity coming toward her and expects it to arrive. After a period of time during which the entity is moving toward Ego, the entity arrives, and Ego's expectation is realized.

Target-Domain Scenario of Moving Time

Ego imagines a point or period of time in the future and expects it to occur. After a while, it occurs, and her expectation is realized.

The grounding scenario and Target-Domain scenario are *experiential gestalts*, in the sense of Lakoff and Johnson 1980, Chapter 15. On this view, concepts that are primarily understood in terms of experience that has both spatial and temporal dimensions (i.e. *motion* concepts) are used to structure temporal concepts that have no spatial dimension. In other words, what the Moving Time metaphor does is construe a temporal experience-type in terms of a special case of that experience-type — a motion event (cf. Grady 1999b, C. Johnson 1999a, Lakoff and Turner 1989, on *generic as specific*). This view of conceptual metaphor may seem at odds with our understanding that a conceptual metaphor is a *cross-Domain* mapping. But all that *cross-Domain* means in this context is that motion concepts and temporal concepts are in principle distinct.

The Motion Toward Ego scenario has the characteristics described in Grady 1997a of a good grounding for a metaphor. The scenario occurs frequently, and it is significant because people typically care about who or what comes to them. In other words, the spatial and temporal concepts are saliently and regularly correlated in the experience. This is equally true in rural Senegal and the urban US, and is likely to be true in any culture.

This experiential grounding directly motivates the Moving Time mapping given in Table 2.2 below, which consists of several of the

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submappings given in Table 2.1. I am focusing on this part of the mapping because in it the relationships between the experiential grounding, the mapping, and the lexical semantics of words like *ñów* and its English translation *come* are particularly clear.

The notion of *passing* which is included in Table 2.1 is intuitively part of the same kind of experience as that characterized in the Motion Toward Ego scenario, and it is likely that the salience and regularity of the temporal correlation in the Motion Toward Ego scenario plays a role in motivating speakers to attend to the analogous temporal correlation in experiences of *passing*, but I will not develop such an account here (See Lakoff and Johnson 1999).

Table 2.2 : Submappings in the Moving Time metaphor that are directly based on the scenario of Motion Toward Ego.

SOURCE DOMAIN		TARGET DOMAIN
An entity moving toward Ego.	→	A future point or period of time.
Location of entity.	→	Ego's future.
Ego's "here."	→	Ego's "now."
Increasing proximity of mover to goal.	→	Increasing immanence of the expected time.
Arrival of entity at Ego's location.	→	Occurrence of point or period of time.
Co-location.	→	Simultaneity.

The way experience is lexically encoded in Wolof and English with the words *ñów* and *come* is potentially relevant to the status of the Moving Time metaphor in those languages. In the discussion below, what I say about *come* is also true of *ñów*.

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2.2.1. *Semantic frames*

The meanings of words can be characterized in terms of *semantic frames* (Fillmore 1982a, 1985; Fillmore and Atkins 1992; cf. Baker 1999, C. Johnson 1999b), which are organized construals of experience that words and grammatical constructions evoke. A frame is characterized in terms of the participants it contains and the roles that the participants play in the frame. The frames associated with the Source-Domain uses of the vocabulary that is involved in metaphorical mappings play a crucial role in structuring the metaphors because these frames structure how the Source-Domain concepts are understood.

The semantic frame associated with the word *come* consists of a person from whose point of view an event of motion is understood, a region occupied by that person, and an entity that moves along a path toward, and then arrives in, that region. (Cf. Fillmore 1997/1971.) The point of view specified by this frame plays an important role in the Moving Time metaphor. More generally, in spatial and temporal experience there is always a potential for point of view to play a role because spatial and temporal phenomena are always experienced from some point of view.

2.2.2. *Experiential grounding, lexicon, and context*

As we have seen, the experiential grounding of the Moving Time metaphor is a scenario of motion, valid for both Wolof speakers and English speakers, that has a salient temporal component. I have claimed that the salience of the temporal component in the grounding scenario motivates people to base temporal expressions on that scenario. Let us see in a little more detail how Moving Time expressions are motivated by the grounding scenario, and the role that the word *come* or *ñów* plays in that motivation. What I will give here is reminiscent of the sort of account found in the grammaticalization literature that emphasizes context-induced

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reinterpretation (e.g. Bybee, Perkins, and Pagliuca 1994; Heine, Claudi, and Hünnemeyer 1991a,b; Traugott 1985b, Traugott and König 1991). A difference is that in the case considered here reinterpretation is treated as part of the motivation for metaphor rather than an alternative to metaphor. This is similar to the views of Heine, Claudi, and Hünnemeyer (1991a, b).

As mentioned above, the current account tries to specify an important relationship between metonymy and metaphor: The emergence of the conceptual mapping between the Source-Domain and Target-Domain concepts of a metaphor may arise in the sort of context in which the Target-Domain concept can be metonymically referred to by a word that conventionally denotes the Source-Domain concept (Heine, Claudi, and Hünnemeyer 1991a,b; cf. Grady 1999b).

The exemplification given below of the motivation of Moving Time expressions uses Wolof. The same account is valid for English metaphorical usages of this type, as can be inferred from the glosses of the Wolof examples.

An example of a context in which the physical and temporal components of a *ñów* 'come' expression are salient is typical in rural Senegal in a situation in which someone is telling the driver of a rural taxi to wait for a passenger who is coming, as in example 2a below.

2) a. *Mungiy ñów! Mungiy ñów!*
3:PRSNTTV:IMPF[3] come 3:PRSNTTV:IMPF come
'She's coming! She's coming!'

In this case the purpose of saying 'She's coming' is to assert that the person will arrive soon. The speaker talks about an ongoing event in order to metonymically make a claim about an expected future event. In example 2a, the physical component is highly salient because a person is a good example of a physical entity that moves from one place to another. Examples 2b-c below emphasize the spatial component less than 2a does because *taw* 'rain'

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is not a good example of a bounded entity that goes from one place to another. This allows the temporal component to be relatively more prominent.

2) b. *Taw baangi ñów.*
rain the:PRSNTTV come
'The rain is coming.' It's going to rain.'
[AK, 091999]

c. *Taw baangi waaj a ñów.*
rain the:PRSNTTV prepare MBA come
'The rain is getting ready to come.' 'It's going to rain.'
[s XW, 926]

Examples 2d-e below emphasize the temporal component even more because *nawet* 'the rainy season' is not a thing that moves, even though it is associated in experience with the rain, which can be thought of as a thing that moves.

2) d. *Nawet baangi ñów — mbaa sa jiwu mat na?*
rainy.season the:PRSNTTV come Q your seed be.complete PERF.3
'The rainy season is coming — I hope you have enough seed.' (It is important in rural Senegal to be prepared to plant when the rainy season comes.)
[AK, 091999]

e. *Pare leen nawet ñów na de.*
get.ready PL.IMPR rainy.season come PERF.3 EMPH
"Get ready, the rainy season has come." (I.e., The rainy season is here.)
[s C, 15 oct]

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Finally, in 2f below, there is no longer a hint of physical motion, because *noor* 'the dry season' does not involve anything saliently moving to the location of the speech act. The claim is that metonymic associations like those in 2a-e are part of the motivation for examples like 2f. Example 2f is a clear case of metaphor because the vocabulary of motion is used to talk about an event that is not a motion event, yet the temporal inferences that arise the grounding scenario of physical movement are present.

2) f. *Noor* *ñów* *na* *léegi.*
dry-season come PERF.3 now
"The dry season has come now."
'The dry season is here.'
[att.] [s R, Lu:144]

The case presented here is further motivation, in addition to the reasons given by Grady (1997a), to try to be as precise as possible in identifying the relationships that obtain between experiential grounding, metaphorical mappings, and metaphorical expressions. When these relationships are fairly precisely identified, the fact that the emergence of the Moving Time metaphor involves a shift of emphasis within a single experience that can be thought of as belonging to a single domain does not make it seem less like a metaphor. (On the view advocated here, of course, *experiences* do not belong to domains anyway.)

This way of looking at the emergence of metaphor highlights the potential role of indexicality and metonymy in the grounding of metaphors (cf. Grady 1999b; Heine, Claudi, and Hünnemeyer 1991a,b; Kövecses and Radden 1998). Because of the potential contribution of metonymy, communicative behavior potentially plays an important role in the emergence of metaphorical expressions (C. Johnson 1999a).

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Summary and conclusions.

The Moving Time uses of *ñów* and *come* show a remarkable degree of similarity between two very different languages, spoken in different cultures. This similarity is best explained as being due to universal aspects of human experience. But the fact that Wolof and English have words (*ñów* and *come*) with highly similar semantics (as well as grammatical constructions that can be put to equivalent uses) is a crucial part of why the two languages have versions of the Moving Time metaphor that are virtually identical. The way experience is organized by the lexicon is a crucial part of conceptual mapping. In order for languages to share the Moving Time metaphor at a level of detail like the one we have seen here, they will also need to have in common a way of saying COME.[4] While potentially universal cognitive abilities and aspects of experience are crucial in the grounding of metaphors, the role of language is also essential.

2.3. The deictic quality of *ñów* and *come*

The Moving Time metaphor as instantiated with *ñów* and its English translation *come* is inherently deictic. As is well known (Fillmore e.g. 1997 /1971), *come* is a deictic word. Physical motion uses of *come* presuppose that one or the other of certain conditions are satisfied in the context of utterance. The simplest of these conditions, and the one that is relevant to Moving Time, is that the goal of movement be a region occupied by the speaker. So, in a prototypical case, if I say *Harry is coming*, I mean that Harry is moving toward my location. By *prototypical case*, I mean a case in which the speaker is speaking to the addressee face to face and the discourse has not introduced any context that would induce the interlocutors to take the utterance as presupposing spatial coordinates other than those of the setting of the speech act.

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The conditions on the use of *ñów* are very similar to the conditions on *come*, and the two can safely be discussed together. Just as understanding an instance of a prototypical spatial use of *ñów* or *come* depends on knowing where it was uttered, understanding a prototypical instance of the Moving Time metaphor as instantiated with *ñów* or *come* depends on knowing when it was uttered.

Before continuing, let me introduce some terminology that will be useful for discussing motion events (regardless of whether they involve deixis). The term *translational* motion refers to motion that involves going from one place to another, as opposed to wiggling or jumping up and down, for example. I will use the term *figure* (in the sense of Talmy 1978) to refer to an entity whose location is at issue. For example, in 2a above ('She's coming! She's coming!), the person who is coming toward the taxi is the figure. The location of the taxi is the reference point (RP) with respect to which the figure is located (but the notions of figure and RP do *not* necessarily involve deixis). I will use the term RP for this conceptual role in general, but I do not claim that the RP is necessarily construed as a point. Where appropriate I will use the term reference object or reference place (RP) for the same conceptual role. I will also use the term *figure* to refer to a time whose status is determined relative to a time which is known or determinable, and this latter time will be called the *RP*. (*Figure* and *RP* correspond to Talmy's [1978] *figure* and *ground*, and, in most cases, to Langacker's [1987] *trajector* and *landmark*.)

The claim that the Moving Time metaphor as instantiated with *ñów* or *come* is inherently deictic can be illustrated in connection with a formal fact about Moving Time *ñów* and *come* expressions, which is that the RP relative to which a figure is metaphorically located in such expressions is never stated overtly. This fact about Moving Time metaphors with *ñów* and *come* is exemplified below.

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3) a. *Tabaski mungiy* *ñów.*
tabaski 3:PRSNTTV:IMPF come
'Tabaski is coming.' (Tabaski is a major holiday [*Eid al Adha*].)

b. *?Tabaski mungiy* *ñów* *fii.*
tabaski 3:PRSNTTV:IMPF come here
Intended: Tabaski is coming here. (The question mark indicates that the sentence is bad on the intended reading, 'It will be Tabaski soon.')

c. *Christmas is coming.*
d. *?Christmas is coming here.* (The question mark indicates that the sentence is bad on the intended reading, 'It will be Christmas soon.')

The reason that Wolof and English do not overtly encode the reference point (RP) of *ñów/come* in Moving Time expressions has to do with the fact that the RP is understood as part of the *ground* of the speech act (i.e. its participants and immediate circumstances [Langacker 1991:548]) and thus is assumed to be part of the common ground (Clark 1996a,b) shared by the interlocutors, and it would be contradictory for a speaker to specify something she assumes the addressee is already aware of. Langacker (1985, 1991) has noted the tendency for elements of the ground to not be coded overtly in English. Temporal examples differ from spatial ones in that in the spatial cases, there is a potential contrast in the value of the goal of motion encoded by COME; for example *coming to my house* vs. *coming to Oakland* (given that my house is in Oakland). There is no analogous contrast (where face to face communication is involved) with the notion of Ego's "now" (which is the "goal" of metaphorical motion) in the Moving Time metaphor. This fact about Moving Time *ñów* and *come* expressions can be characterized in the following way: In such expressions, the conceptualizer always supplies the RP of *ñów/come* as part of her contribution to the act of understanding the expression. (I use the term *conceptualizer* to refer to the role of the person in

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my description who is forming the concepts represented by a linguistic form -- i.e., the speaker/writer, addressee/reader, person who is imagining an utterance, etc; cf. Langacker 1987.)

However, there are uses of Moving Time *ñów/come* in which the RP is not understood relative to the situation of utterance (cf. Emanatian 1992). In order to see how the claim that Moving Time *ñów* and *come* are inherently deictic holds up in light of these cases, we will need to discuss deixis more precisely. To this end, I will introduce some terms and ideas from Hanks 1990 (following Bühler [1990 /1934]; cf. also Fillmore 1982b, Langacker 1991). I will use the term *indexical ground* to talk about the setting relative to which a deictic word is understood. This use of the word *ground* is compatible with Langacker's sense in which I used it above. The indexical ground is where the *deictic center* is, in Fillmore's (1982b) terminology. The reason for the term *indexical ground* is that we need a notion of a deictic *field* (Bühler 1990/1934) in addition to a center.

The indexical ground is the setting, circumstances, background, frame of reference, or field of action in or against which a deictic word refers to an entity. So, for example, when I say, in prototypical face to face conversation, *This teapot belonged to my grandmother*, part of what I do as I *refer* to the teapot with the deictic demonstrative *this* is *index* my body as present in the indexical ground. In doing so I rely on my addressee's understanding of how the word *this* is conventionally used by speakers of English; e.g., that its referent should be found somewhere near the speaker. In referring to the teapot, I treat it as a focus of attention. In indexing my body I treat it as part of the background of the act of reference. Similarly, a speaker who uses the word *come* in a prototypical context indexes her location as the goal of movement.

We have seen that in Moving Time expressions, the RP of *ñów* or *come* maps onto Ego's "now"; prototypically this is the "now" of the speaker and addressee. But this is not always the case, as in the following example, where the person (Ego) from whose point of view Christmas is "*coming*" might be a character in a narrative.

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4) *Christmas was coming.*

This is a case of what we will call a *decentered* indexical ground, in which the use of a deictic form is understood relative to an indexical ground that is somehow displaced or altered with respect to the actual situation in which it is produced (Hanks 1990:197). In the case of 4, we can simply say that the sentence is understood as if the interlocutors were in some setting other than the setting of the speech act.[5] This kind of decentering has been called *shifted deictic center* by Fillmore (1982b). Fillmore (1976:102), discussing *point of view* and *observation point* in discourse, provides a good example of decentering. It is the first sentence of Hemingway's "The Killers":

5) *The door of Henry's lunchroom opened and two men came in.*

The reader/conceptualizer understands the lexeme *come* in this sentence just as she would a prototypical use, except that the setting is imaginary. Within this imaginary setting, the participants and events have relationships to each other that are analogous to those in a prototypical scenario that would be talked about with *come*. The reader accomplishes her understanding of the imaginary scene partly by taking what she knows about how the lexeme *come* is used and constructing a story world in which the goal of motion (RP) of *come* is at the same imaginary place as the point of view from which the reader experiences the unfolding events in imagination. In other words, 5 above is understood relative to a decentered indexical ground (cf. e.g., Almeida 1995, Banfield 1982, Chafe 1994, Fauconnier 1997, Fleischman 1990, Zubin and Hewitt 1995:135).

Again exemplifying with written fiction, there occurs a kind of decentering that is more specifically temporal. Here is an illustration from Fillmore (1982b:39). In 6a below, the use of the time-deictic word *ago* signals

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that "several years" should be counted back from the moment of speech. (That is, the moment of speech is the RP of *ago*.)

6) a. *Several years ago he lived near the beach.*

But in the next sentence, the pluperfect conjugation forces the conceptualizer to interpret the temporal RP relative to which *ago* is understood as having been established in a narrative.

b. *Several years ago, he had lived near the beach.*

In this example, the RP of *ago* is anchored in a narrated event, not directly in the situation of utterance/writing. As we read the sentence, we get the feeling that the *several years* are calculated back from the "now" of someone in the narrative. (And that "now," in turn, is typically coded in the past tense, cf. Fleischman 1990, Reichenbach 1947.) That is, the deictic word *ago* is understood relative to a decentered indexical ground, as is the deictic temporal metaphor in *Christmas was coming*.

In the cases we have just examined, the scenario involving the decentered indexical ground preserves most of the properties of the prototype: the reader/conceptualizer imagines a narrated scene containing a person who is located somewhere and is having an experience. Other instances of decentering may preserve fewer properties of the prototype. Below I present a cline of uses of the word *come*, starting from a type of sentence that would (in actual use) be grounded in the "here and now," and varying gradually from that situation to what I will call a "radically decentered" use that has little connection with any particular "here and now." I will claim that even the radically decentered uses retain elements of the essentially deictic character of *come*, and that the same is true of Wolof *ñów*. What this amounts to is that in all cases, the conceptualizer supplies the RP of *come/ñów*. A few words are

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included after each example to indicate what the RP of *come* is. The character of the observed range of variation — from directly anchored in the situation of the speech act to radically decentered — is not a special property of temporal uses of *come* or *ñów*, but could also be exemplified for physical motion uses.

(Incidentally, a decentered indexical ground is appropriately described as a *mental space* in the sense of Fauconnier (1994/1985). This is clear, for example, in 7b, where the 'space builder' *when* helps indicate the decentered indexical ground. See Rubba 1996.)

7) a. *Spring has come.* RP = The moment of the speech act.

b. *When you see the blossoms, you will know that spring has come.* RP = A locatable imagined time in the future, with an imaginary experiencer.

c. *The day will come (when money no longer determines elections).* RP = An unlocatable time in the future with no explicit experiencer.

d. (Two examples are given for the same area on the cline.)

i) *Tomorrow never comes.* (I.e., the day that is called tomorrow on a given day will not be called tomorrow when it comes.) RP = Any day construed as "today."

ii) *Spring break usually comes in April.* RP = Any imagined present, with the condition that the month is April.

In terms of content, the RP of the examples in 7d is not any kind of tangible "here and now." But the construal of 7d retains a characteristic of decentered deixis in that the conceptualizer must supply the RP. (On *content*

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vs. *construal* see Langacker 1987.) This is reflected grammatically by the lack of overt instantiation of the RP of *come*.

Next is exemplified a cline for Wolof that is analogous to the English one we just saw. The comments just made for the English sentences in 7d are also applicable to their Wolof counterparts below. Again, a few words are given after each example to indicate what the RP is.

8) a. *Noor ñów na léegi*
dry.season come PERF.3 now
"The dry season has already come."
'The dry season is already here.'
[att.] [s R, Lu:144]
RP = The moment of the speech act.

b. *Kenn du laaj kenn sax, dana xam ne*
anyone IMPF:NEG ask anyone EMPH FUT.3 know COMP
léegi nawet ñów na rekk.
now rainy.season come PERF.3 only
'No one even asks anyone, they just know that now the rainy season has come.' (They know because of the time of year and the rain.)
[s XW, An:68]
RP = A locatable imagined time, with an imaginary experiencer.

c. ... *Dina am de; dina ñów.*
FUT.3 be EMPH FUT.3 come
'It will happen; it will come.' (Speaking of the end of the world.)
[att.] [s T, Xi:41]
RP = An unlocatable time in the future with no explicit experiencer.

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d. (Two examples are given for the same area on the cline.)

i) Beneen yoon *mooy* *'lu* *ñówogut'*
another occasion 3.SUBJ.FOC:AUX REL come:yet:NEG
"*Another time* means 'something which hasn't come yet'."
'*Another time* means "a future time".' (This was said by way of explaining the meaning of *beneen yoon* 'another time'.)
[att.] [s FS, Xi:23]
RP = Any imagined present.

ii) *Séebéet mungi* *ñów* *fu*
sebet 3:PRSNTTV come where
noor *bi* *bëgg* *a* *jeexe.*
dry.season the want MBA finish:VAL
'Sebet [a season] comes when the dry season is about finished.'
[AY, Lu:153]
RP = Any imagined present, with the condition that the dry season is about over.

Summary

In this section we have seen further evidence of extensive similarity between Moving Time expressions with Wolof *ñów* and those with English *come*. The Moving Time metaphor as I have characterized it is fundamentally deictic, even though decentered uses occur which are not anchored in the situation of utterance. In the next section we will contrast the deictic nature of *ñów* 'come' with a word that is used in Wolof temporal expressions but is fundamentally non-deictic. This corresponds to a difference in types of Moving Time metaphor. What we have been calling simply the Moving Time metaphor we will now refer to as the *Ego-centered* Moving Time metaphor, since Ego is the determiner of the RP in such uses.

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2.4. A non-deictic Moving Time metaphor.

The expressions to be studied in this section employ the word *fekk* 'become co-located with', which does not have a normal-sounding translation in English. We will see that issues of point of view are crucial to an understanding of how metaphorical temporal expressions encode meaning. We will also see the importance of the ways in which metaphorical expressions are habitually used, and the ways in which particular Source-Domain concepts are encoded in the lexicons of particular languages. Metaphor is not purely based on universal human experience — language plays a role in how experience is categorized (Slobin 1996, 1998; Whorf 1956).

The meaning of *fekk* 'become co-located with' is somewhat like that of English expressions like *encounter, come across,* or *find.* But there are respects in which each of these words would be misleading as a translation of *fekk.* What *fekk* is used to talk about is a type of scenario in which one entity (the mover and grammatical subject) arrives at a location where another entity is already situated, as in the example below.

9) *Binta fekk na*
Binta become.co-located.with PERF.3
bool ba ca waañ wa
bowl the.DIST LOCPREP.DIST kitchen the.DIST
"Binta became co-located with the bowl in the kitchen."
"Binta 'found' the bowl in the kitchen."
'The bowl was in the kitchen when Binta got there.'

Crucially, *fekk* does not place any requirements (e.g. animacy) on any of its arguments other than the requirements just mentioned involving motion and location. *Fekk* requires that its subject be a mover but not necessarily an

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experiencer. Notice how *fekk* contrasts with the English word *find*, which requires that its (nonpassive) subject be an experiencer but not necessarily a mover.

In Wolof, the ordinary way to say that a given state already obtained or did not obtain at a certain time involves a metaphorical *fekk* construction, as exemplified below. *Find* is therefore an unusual translation of a very ordinary use of *fekk* in 10a; and in 10b, *find* sounds quite bizarre as a translation of a use of *fekk* that is also quite ordinary.

10) a. *Midi fekk na*
noon become.co-located.with PERF.3
bool ba ca waañ wa.
bowl the.DIST LOCPREP.DIST kitchen the.DIST
"Noon 'found' the bowl in the kitchen."
'The bowl was in the kitchen at noon.'

b. *Midi fekku ko fa.*
Noon become.co-located.with:NEG.3 3.OBJ there
"Noon didn't 'find' it there."
'It wasn't there at noon.'

The grounding scenario and Target-Domain scenario for this metaphor are given below.

Grounding scenario
An entity is located at a place when another entity arrives there.

Target-Domain scenario
A state of affairs exists when a time occurs.

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Parallel to what we saw previously in the case of *ñów* and *come*, the grounding scenario denoted by *fekk* occurs frequently and is often significant in daily life. Again, the grounding scenario is not only an instance of, but a good example of the Target-Domain scenario: a time of arrival is an instance of a time, and the time of an arrival at a place is a saliently perceivable and easily understandable example of a time relative to which the existence of a state of affairs at that place can be noted. The mappings between Source-Domain concepts and Target-Domain concepts are given below.

Table 2.3: The fekk *version of the Moving Time metaphor.*

SOURCE DOMAIN		TARGET DOMAIN
A figural physical entity.	→	A figural time.
A place.	→	The temporal component of a situation (i.e., a temporal background).
Arrival of the figural entity at the place.	→	Occurrence of the time.
Co-location.	→	Simultaneity.

What this metaphor does is equate a figural time with the time at which a state of affairs obtains. (The figural time is figural in the sense that attention is focused on it.) Thus, for example, in 10a above, the time that the bowl was in the kitchen (= the temporal component of the situation) is understood to be noon (= the figural time). It is appropriate to analyze this metaphor as an instance of Moving Time because it involves the same schematic type of motion event and the same schematic type of temporal event as in the case of *ñów/come* discussed above. That is, in both cases an entity maps onto a time and the arrival of the entity at a place maps onto the occurrence of a time.

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The first point I want to focus on involving the *fekk* version of the Moving Time metaphor is how it contrasts regarding point of view with the *ñów/come* version. Next we will discuss the question why *fekk* expressions have no stylistically equivalent counterparts in English and how lexicon affects the ways in which conceptual metaphors are instantiated in a language.

2.4.1. *Source-Domain lexicon and point of view in the* ñów/fekk *contrast.*

Although the relationship between point of view and metaphor is beginning to receive attention (Bergen and Plauché 1998, Emanatian 1992, Lakoff 1987, Radden 1996, Rubba 1996, Taub 1996), the type of contrast involving point of view that we will examine here has not received much interest so far within conceptual metaphor theory (though see Traugott 1975, 1978, 1985a; Hill 1978). Point of view is crucially involved in how temporal as well as spatial experience is understood and talked about. Moving Time metaphors, which within conceptual metaphor theory have previously been assumed to be a unified phenomenon, can be separated into two distinct types based on considerations of point of view: Ego-centered (involving notions like COME and PASS) vs. Other-centered, the type that *fekk* expressions instantiate.

In this subsection, we will see that *fekk* and *ñów* denote what is schematically the same type of motion of event, but construe the event-type relative to a different point of view. Because of this, and because the aspectual construals imposed by the two verbs are different, the two verbs have very different meanings in their physical uses. This in turn motivates fundamental differences in their temporal uses. While *ñów* expressions construe temporal experience from Ego's point of view, *fekk* expressions frame such experience independently of Ego's point of view. This property of *fekk* was apparent in example 10a above, *Midi fekk na bool ba ca waañ wa* 'The bowl was in the kitchen at noon'. Another example is given below. I put

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extra quotes around *find* when I use it to gloss *fekk* to remind readers of the fact that *fekk* is a verb of motion/location while *find* is not.

11) ... *Sãviye dina fekk baykat bi jaay na*
January FUT.3 become.co-located.with farmer the sell PERF.3
gerteam ....
peanut:GEN
"... January will 'find' the farmer having sold her peanuts..."
'... the farmer will have sold her peanuts by January ...'
[s XW, An:53]

In order to characterize the different temporal uses of *fekk* and *ñów*, let us begin with the physical uses. The schematic motion event that the semantics of *fekk* and *ñów* have in common can be summarized as follows.

The schematic motion event common to fekk *and* ñów:
An entity moves and ends up located in a region that is already occupied. (There are three participants in the event: A mover, a location, and an entity that occupies the location at the time the mover gets there. These are explicitly named in the *fekk* predication. In many *ñów* predications [as is the case with *come*] only the mover is named. The *region* involved in *ñów* predications is Ego's location, and the entity that occupies the region is Ego.)

In order to see how *fekk* and *ñów* contrast semantically, let us compare examples 12a-b below. The two verbs contrast i) in terms of how they depict the participants in the motion event, and ii) in terms of aspect (how the internal temporal contour of the event is depicted). We will discuss aspect first.

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12) a. *Binta fekk na*

Binta become.co-located.with PERF.3

bool ba ca waañ wa.

bowl the.DIST LOCPREP.DIST kitchen the.DIST

"Binta became co-located with the bowl in the kitchen."

'The bowl was in the kitchen when Binta got there.' [Repeated from above with a slightly altered gloss.]

b. *Sa xarit ñów na.*

Your friend come PERF.3

"Your friend has come."

'Your friend is here.'

The aspectual difference between *fekk* and *ñów* has to do with which stage of the schematic motion event is designated, or *profiled* (Langacker 1987:491) by the *ñów* or *fekk* predication. I will describe how the verbs contrast in the perfect conjugation, as they appear in 12 above. *Fekk na* 'became co-located with' (12a) profiles the transition from not being in the goal region to being in the goal region; *ñów na* 'has come' profiles the resulting state in which the figure is in the region, as in 12b (cf. Robert 1991).

Since *fekk* profiles a perfective event, it cannot refer to the present under normal conditions. (Cf. Langacker 1991, who argues that a full instance of a perfectively construed event cannot be aligned precisely with the moment of speech. He contrasts this with the case of imperfectives (including states) which can be aligned with the present moment because any subpart of an imperfective process counts as an instance of the process.)

Turning now to how the two verbs depict the participants in the motion event in 12, a striking difference is that the *fekk* predication names all three participants while the *ñów* predication names only the mover; this is typical of the behavior of *fekk*[6] and *ñów*. This behavior is a formal reflection

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of the fact that the *fekk* predication typically sets up a scene with a location and participants that are distinct from those of the speech act, while the prototypical *ñów* predication assumes the situation of utterance as its setting.

The next pair of examples shows how these properties of *fekk* and *ñów* are realized in temporal expressions. The two examples involve parallel framings except for the parameters just discussed, on which *fekk* and *ñów* unavoidably differ — aspect and point of view. In both 13a and 13b below -- which are set in different contexts — the speaker is talking about her current situation. *Fekk* and *ñów* are both in the perfect conjugation and are used to talk about completed events, and both examples are set during the dry season, which we can think of as a state that results from the event referred to by *fekk* or *ñów*. In both examples, the occurrence of a time is construed metaphorically as the arrival of an entity at a region.

The context for the *fekk* example in 13a below involves a wife who has gone to stay with her family in a town away from her husband. She went there before the beginning of the dry season, and her husband, who had promised to call her every week, finally calls for the first time when the dry season is almost over. The wife says:

13) a. *Noor* *fekk na* *ma* *fii* *bay*
dry.season FEKK PERF.3 1.OBJ here to.the.point.of:IMPF
waaj *a* *jeex* *te* *dégguma* *la.*
prepare MBA be.finished and hear:NEG.1.SUBJ 2.OBJ
"The dry season became co-located with me here to the point of almost being finished [i.e., "and now it's almost finished"] and I haven't heard from you [until now]."
'I've been here since the beginning of the dry season and now that it's is almost over you finally call me.' [AK]

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b. *Noor* *ñów* *na* *léegi.*
dry.season come PERF.3 now
"The dry season has come now." 'The dry season is here.'
[att.] [s R, Lu:144]

In example 13a above, *fekk* refers to a time that is distinct from the time of the speech act, even though the character in the example is speaking about her current situation. In this construction the speaker names herself (*ma* 'me') and the place of utterance (*fii* here), thus individuating them as entities separate from the "now" of the speech act. This separation is avoided in the case of *ñów* in 13b because the RP of *ñów* is left unsaid and thus necessarily interpreted as the shared "now" of the speech act.

Before closing this section I will further exemplify physical motion/location uses of *fekk* in which it is used in the manner just described to set up a scene that is distinct from the indexical ground of utterance:

14) *Xanaa daal dafa reppoon!*
'She must have been destined to die!'

Daawul *toog ci* *bunt kër* *gi,*
AUX:PAST.HABIT:NEG sit LOCPREP door home the
tey *mu* *def ko* *rekk, kaar bi* *fekk* *ko* *fa.*
today 3.SUBJ do 3.OBJ only, bus the FEKK 3.OBJ there.
'She never used to sit in front of her house; she did it today and the bus found her there.'
[Fal, Santos, and Doneux 1990 under *repp*]

Example 15 below exemplifies this same property of disconnectedness from the indexical ground but with a future interpretation. 15 also

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exemplifies in a Source-Domain use the property mentioned above that *fekk* predications do not refer to the present even if they refer to the speaker and place of utterance. We also see that even when marked as imperfective,[7] *fekk* does not refer to the present.

15) *Waaye, xaarleen rekk,*
'But just wait,'

fii la may fekk
here NONSUBJ.FOC.3 1.OBJ:IMPF FEKK
tey ak samay pexe
today with my:PL solution
"here is where he'll 'find' me with my resourcefulness."
'I'll be right here and ready for him when he comes.'
[Juuf 1996:17]

Summary

The temporal *fekk* and *ñów* expressions we have examined in this section instantiate a single schematic metaphorical mapping — the Moving Time metaphor. But Moving Time *fekk* vs. *ñów* expressions have strikingly different meanings. Elements of aspect and point of view in the lexical coding of experience are a crucial part of this difference. These differences justify positing two different Moving Time mappings: In contrast to the Ego-centered mapping involved with *ñów* and *come,* the mapping involved with *fekk* is Other-centered.

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2.4.2. Source-Domain lexicon and a contrast in use between Wolof and English.

One day I was expecting a phone call at two o'clock at a telecenter in rural Saloum. I got there late and I was trying to find out if my party had called, but it turned out that the attendant had not been at the telecenter at two o'clock. This was expressed to me in the following way.

16) *Dëes ëer* *fekku* *ko* *fa.*
two o'clock become.co-located.with:NEG.3 3.OBJ there
"Two o'clock didn't become co-located with him there."
'He wasn't there at two o'clock.'

This anecdote makes the point that the Wolof sentence in example 16 above is stylistically unmarked. Other ways of saying that a certain state obtained (or did not obtain) at a given time would be marked in Wolof. Both English and Wolof have the version of the Moving Time metaphor exemplified in 16. But in Wolof is it used habitually in ordinary conversation, whereas in English it is stylistically restricted (see below). Part of the reason for this contrast in the use of metaphorical expressions is due to a contrast in the lexicons of Wolof and English. This is a contrast involving physical, non-metaphorical uses of *fekk*, which encodes a concept that is not encoded by any English word.

In terms of practical utility, a good translation for *fekk* is *find*. The semi-literal gloss of Moving Time *fekk* as *find*, as in the example repeated below, is appropriate if we think of it as the nearest (literal) English equivalent to the Wolof. But we have to keep in mind *fekk* is a verb of motion, while *find* is not. Also, the nuance of the time being personified that we get in English is absent in Wolof, and temporal uses of *fekk* contrast stylistically with temporal uses of *find*. This use of the word *find* is an example of what Langacker (1991:345) calls a *setting subject construction.*

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These constructions give prominence to the setting which it would not have if referred to in a more ordinary way. Perhaps because temporal uses of *find* serve the function of setting a narrative scene, they are hard to contextualize in the negative. Compare *Noon didn't find the bowl in the kitchen.*

17) *Midi fekk na bool ba*
noon become.co-located.with PERF.1 bowl the.DIST
ca waañ wa.
LOCPREP.DIST kitchen the.DIST
"Noon found the bowl in the kitchen."

The stylistic contrast exemplified in 17 above is part of a larger contrast in what counts as *unmarked coding* (Langacker 1991) in Wolof vs. English: it is less marked in Wolof than in English to code a specific element of the setting as a subject of an event verb (See Moore 1997b). An example with a time as subject is given below. Compare the Wolof in 18a with its stylistically equivalent English translation 'It's noon.'

18) a. *Midi jot na.*
noon reach PERF.3
"Noon has reached."
'It's noon.' (The verb *jot* 'reach' is discussed in Chapter 7.)

Some further examples are given below.

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18) b. ... *Buñ* *toogee* *be* *asamaan* *mungi* *yëngu,*
when:1.PL.SUBJ sit:ANT to.the.point.of sky 3:PRSNTTV shake
ñungee *wax* *foofu* *séebéet.*
1.PL:PRSNTTV:IMPF say there sebet.
"When we sit to the point when the sky shakes, we say there *séebéet.*"
'When the time of year comes around when it thunders, we call that *séebéet.*' (*Séebéet* is the name of a season.)
[s C, 101597]

c. ... *Asamaan* *bi* *moo* *wàcce* *ndox...*
sky the 3.SUBJ.FOC fall:VAL water
"...The sky drops water..."
'...It rains.... (This was part of an explanation of the meaning of the word *suux*, which is a hollow place in a tree where rainwater collects.)
[s C, 101597]

d. *Oxsat* *bi* *taxawee* *rekk la* *ndox*
Oxsat when stand:ANT only NONSUBJ.FOC.3 water
kumaase di *wàcc....*
begin IMPF fall
"When *oxsat* [a season] has (just) stood water begins to fall."
'As soon as it's *oxsat* the rains start.'
[s XW, 09.26.97]

A related contrast between Wolof and English has to do not specifically with what is typically coded as a subject, but with what is coded directly as a transitive relation between an aspect of the setting and a human participant. (Note that *fekk* is (di-) transitive. *Wàcce* 'drop' is transitive in 18c above.) In 18e below, the subject of the verb *xeeñ* (the couscous) is the stimulus and the object is the experiencer. *Xeeñ* in this use is a transitive verb meaning 'cause to perceive a smell'.

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18) e. *Cere ji xeeñ na ma*

Couscous the cause.to.smell PERF.3 1.OBJ

"The couscous 'smells' me." [I.e., "the couscous causes me to have the sensation of smelling it.][8]

'I can smell the couscous.'

[Munro and Gaye 1997 under *xeeñ*. The translation in single quotes is from the original.]

The difference in what counts as unmarked coding in Wolof and English is one reason why temporal *fekk* predications are ordinary in Wolof but temporal *find* predications are stylistically marked in English. I will propose two further reasons, both of which have to do with lexical properties of *fekk* or *find*. The claim will be that linguistic patterns instantiate habitual categorizations of physical experience and these categorizations are different for Wolof vs. English speakers. I will argue that because of the way these categorizations are linguistically encoded, the Other-centered Moving Time metaphor is unmarked in Wolof but marked in English usage (cf. Slobin 1998, Whorf 1956).

The first relevant property of *fekk* is that it does not place semantic restrictions on its arguments other than the schematic requirements of motion and location mentioned above. The second property, which is related to the first, is that the temporal correlation in motion/location uses of *fekk* is more salient and regular than any temporal correlation in motion/location uses of *find* (which of course is not primarily a verb of motion/location). I will discuss the first reason first.

As was mentioned above, *fekk* contrasts with *find* in that the subject of *fekk* is a mover but not necessarily an experiencer whereas the (nonpassive) subject of *find* is an experiencer but not necessarily a mover. Note that I can say *I found my keys* if they were lost and then I saw where they were, even if I did not move. This is not possible with *fekk*, which (in the relevant uses)

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means specifically that a mover becomes co-located with an entity in a location.[9] Because of these facts about *fekk*, a metaphorically moving object is unmarked in the grammatical-subject role of *fekk*. This is not true for *find* because in Source-Domain uses of *find* its subject has the experience of becoming aware of something. The following sentences illustrate this lack of experiencer requirements on the subject of *fekk*. Also illustrated is the fact that the Source-Domain *fekk* constructions that are relevant to Moving Time include a complement of location, as a rule.

19) a. *Ku yàgg cib teen,*
who be.long.time LOCPREP:ART well
baag fekk la fa.
pail become.co-located.with you there
"Whoever is at a well for a long time, a pail will become co-located with you there."
'If you spend a long time at a well, a pail will come to you there.'
[Cissé, Guèye, and Touré 1982:35] (This example is a proverb.)

b. *Añ bi fekk na ko fa.*
lunch the FEKK PERF.3 3.OBJ there
"The lunch became co-located with her there."
'She was there [e.g. at home] when the lunch got there.' (This could be said in a context in which someone brought a lunch to someone at her home.)
[AK:030398]

The second reason why *fekk* is particularly appropriate in stylistically unmarked Moving Time expressions is that *fekk* predications specifically encode whether or not something is located in the goal region at the time the mover arrives there. This temporal relation is less salient and less regular in the case of *find*, since *find* predications are primarily concerned with whether

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or not the finder had the experience of becoming aware of something. Consider the following example.

20) a. *Dem na seeti ko waaye fekku ko fa.*
go PERF.3 visit 3.OBJ but FEKK:NEG.3 3.OBJ there
"She went to visit him but she didn't become co-located with him there."
'She went to visit him but he wasn't there.'
[AK:030398]

b. *She went to visit him but she didn't find him there.*

Example 20b above with *find* is compatible with a scenario in which a person went to visit someone at his home but did not find him even though he was there (perhaps because he was working in the attic). *Fekk* predications are not compatible with such a scenario. Thus, *find* predications lack an important temporal entailment that *fekk* predications have; i.e., if mover M did not *fekk* 'become co-located with' entity E in place P, then E was not in P when M got there. The following examples illustrate this contrast between *fekk* and *find*.

20) c. *When she got there, he was there, but she didn't find him.*

Fekk does not have a sense like the sense of *find* exemplified in 20c:

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20) d. *?Bi mu fa ñówee, munga fa woon,*
when 3.SUBJ there come:ANT 3:PRSNTTV:DIST there PAST
waaye fekku ko fa.
but FEKK:NEG.3 3.OBJ there
"When she got there, he was there but she didn't become co-located with him there."
'?When she got there, he was there, but he wasn't there when she got there.'
[AK, 91999]

In order to say something like 20c, it would be possible to say 20e, which is syntactically analogous to 20d. (Analogous given that *fekk* takes three arguments but *gis* 'see' takes only two.)

20) e. *Bi mu fa ñówee, munga fa woon*
when 3.SUBJ there come:ANT 3:PRSNTTV:DIST there PAST
waaye gisu ko.
but see:NEG 3.OBJ
'When she got there, he was there, but she didn't see him.'
[AK, 91999]

Example 20f below makes the same point by showing a way in which *fekk* could be used but *find* would not. What is at issue in 20f is precisely the order in which the different Movers arrived in the goal location.

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20) f. *Bi ma demee Pari fekkuma fa Stéfan.*
when 1.SUBJ go:ANT Paris FEKK:NEG.1 there Stéphane
Bi ma fa amee ñetti fan laa dégg ne
when 1.SUBJ there have:ANT three day NONSUBJ.FOC.1 hear that
dellusi na. Kon moo ma fa fekk.
return:VEN PERF.3 So 3.SUBJ.FOC 1.OBJ there FEKK
"When I went to Paris I didn't 'find' Stéphane there. When I had been there for 3 days I heard that she had returned. So, she was the one who 'found' me there."
'When I went to Paris, Stéphane wasn't there. When I had been there for three days, I heard that she had returned. So she was the one who arrived second.'
[AK, 91999]

The comparison between *fekk* and *find* can be summarized as follows, using 20g below (= the second clause of 20a) as an example.

g. *Fekku ko fa.*
FEKK:NEG.3 3.OBJ there
"She didn't become co-located with him there."
'He wasn't there when she got there.'

The Wolof example in 20g presupposes that the subject of *fekk* went to the place in question and asserts that the referent of *ko* (the object) was not there at that time. This entails that the subject did not become aware of the object's presence in the place referred to by *there*, hence the overlap in meaning between *fekk* and *find* (as in *She didn't find him there*). By contrast, in *She didn't find him there*, what is said is that the subject did not become aware of the presence of the object in the place, which implies that he was not there at that time, but is compatible with other scenarios — that he was there and she did not see him, or that she found him somewhere else.

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Thus, a reason why *fekk* is more appropriate than *find* for conceptualizing ordinary temporal experience is that the motion/location event of becoming co-located that *fekk* denotes has an unvarying and salient temporal component. By contrast, the analogous temporal component in the case of physical uses of *find* is less regular and salient because *find* primarily denotes an experience of becoming aware rather than of being at the same place at the same time.

Summary

My claim is that, in using the word *fekk* to talk about experiences of physical movement and location, Wolof speakers habitually categorize experience in ways that English speakers do not (Slobin 1996 1998; Whorf 1956). The fact that this habit of categorization is conventionally associated with a lexeme (*fekk*) insures that it is a stable part of the Wolof speaker's mental experience that is shared with other members of the speech community (and culture) cf. Pederson et al. 1998. It is thus plausible that the existence of the lexeme *fekk* makes it more likely for speakers to conceptualize physical events a certain way, and is therefore part of what motivates Wolof speakers to construe certain temporal events in terms of the Other-centered Moving Time metaphor. Additionally, the behavior of *fekk* is part of a pattern in which certain kinds of setting-subjects are unmarked in Wolof. Thus, metaphor is not purely a matter of cognitive associations but interacts crucially with particular words in the grammars of particular languages and with language use, and therefore with culture (cf. Gibbs 1999, Hanks 1990, Haviland 1996, C. Johnson 1999b, Lucy 1992a,b).

2.5. Experience, metaphor, and linguistic structure.

So far we have discovered two versions of the Moving Time metaphor: the Ego-centered version and the *fekk/find* version, which is

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Other-centered. What these two metaphors have in common can be stated in terms of the Other-centered (*fekk/find*) version of the Moving Time metaphor in Table 2.3., repeated below.

Table 2.3.: The Other-centered (fekk/find) *version of the Moving Time metaphor.*

SOURCE DOMAIN		TARGET DOMAIN
A figural physical entity.	→	A figural time.
A place.	→	The temporal component of a situation (i.e., a temporal background).
Arrival of the figural entity at the place.	→	Occurrence of a time.

The Other-centered mapping is schematically equivalent to the submappings in the Ego-centered metaphor in which the arrival of an entity at a location maps onto the occurrence of a time. There are two essential differences between the Ego-centered and Other-centered Moving Time metaphors. One difference hangs on the interpretation of *the temporal component of a situation*: if it is interpreted as "now", the metaphor is Ego-centered; otherwise it is Other-centered. The fact that the *temporal component of a situation* is *not* construed as "now" in the Other-centered Moving Time metaphor has to do with the lexical framing imposed by *fekk* or *find* (cf. section 2.4.1) and is not stated explicitly in the mapping.

The other difference is that the Ego-centered version can represent the gradual lapse of time — metaphorically time "passing" — but the Other-centered version cannot. This is because of a lexical property of *fekk* (or *find*): that it denotes a punctual event (change of state) rather than a continuing process of motion (cf. section 2.4.1). (Semantic comparisons among types of temporal metaphors will be given fuller attention in Chapter 6.)

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An important result of the investigation in this chapter is that it gives a thorough account in terms of experiential grounding and metaphor structure of the similarities between certain temporal expressions with Wolof *ñów* and those with English *come*. I suggested above that the lexical similarities between *ñów* and *come* are an important additional part of the metaphor account. The contrast between *fekk* expressions and *find* expressions shows that a theory of mappings between concepts is not in and of itself sufficient to account for the behavior and distribution of metaphorical expressions in all cases. (This is implicit in Grady 1997a. See Taub 1996.) *Fekk* and *find* are exemplified again below.

21) *Midi fekk na ko fa*
noon FEKK PERF.3 3.OBJ there
"Noon 'found' it there."
'It was there at noon.'

Due to semantic differences between *fekk* and *find* (and other differences between the Wolof and English languages), the mapping in Table 2.3. has a different cognitive status for Wolof vs. English speakers; that is, Wolof speakers routinely use the mapping in (thinking and) talking about temporal experience but English speakers do not. The different status of the mapping in Table 2.3. in Wolof and English is unlikely to be due to differences in the kinds of situations that exist in the worlds of Wolof and English speakers, construed pre-linguistically/pre-culturally. That is, in both rural Senegal and the urban US it is the case that people or things are understood to arrive at places where certain situations do or do not obtain. In trying to explain the differences between temporal uses of *fekk* and *find* we should appeal to the fact that Wolof speakers use the word *fekk* in situations of physical movement and location to categorize their experience in ways that English speakers do not use *find* (or any other word) to categorize theirs.

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The grounding scenario for the Other-centered Moving Time mapping in Table 2.3 is something that is singled out for attention by the use of the word *fekk*. That is, the use of the word *fekk* is part of what makes the spatial-temporal correlations in the grounding scenario salient. Thus, the habitual use of the word *fekk* in situations of motion and location helps shape the experiential grounding that motivates Moving Time uses of *fekk*.

2.6. Summary and conclusions.

We have seen two types of Moving Time metaphor, both of which exist in Wolof and English: Ego-centered and Other-centered. The Ego-centered Moving Time expressions we examined are remarkably similar in the two languages. It is likely that this similarity is due not only to the fact that the same experiential grounding is available to both Wolof and English speakers, but also to the similarity of Wolof *ñów* and English *come* (and the similarity of the functions of the grammatical constructions they occur in).

By contrast, the Other-centered expressions we examined are quite different in the two languages. I suggested that this difference is due to the way the lexemes involved play a role in categorizing experiences of motion and location, and thus making experiential correlations salient. Grammatical facts regarding what counts as unmarked coding in the two languages are also relevant.

The Ego-centered/Other-centered distinction in point of view has turned out to be important for characterizing the semantics of metaphorical temporal expressions. Another kind of Other-centered/Ego-centered distinction will be our focus in the next chapter.

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Notes.

[1] In ordinary speech the imperfective marker *-y* is hard to hear before palatal segments such as the *ñ* of *ñów*. In some idiolects, in some contexts, there is no formally marked perfective/imperfective contrast in the presentative. By *formally marked*, I mean marked with the imperfective marker *di/y* . Regarding versions of examples like 1a without the imperfective marking, some consultants report that they understand such examples as if they had an imperfective marker (see Robert 1991). Example 1 was elicited with specific attention to the imperfective marker.

[2] My *grounding scenarios* are very similar to Grady's (1997a) and Grady and Johnson's (1997) *primary scenes*. One major difference is that grounding scenarios involve larger chunks of experience — they last longer. Also, primary scenes can be divided into *subscenes*, but the spatial and temporal dimensions of motion cannot be attended to separately. In order to have a primary-scenes-like analysis of spatial metaphors for temporal phenomena we would have to identify subjective responses -- e.g., expectation, prediction -- to all the important Source-Domain concepts that figure in the grounding scenarios of the various metaphors.

[3] I do not actually have a record of hearing the imperfective marking in the originally attested-in-context version of example 2 (She's coming! She's coming!). The imperfective marking here is added based on discussions with AK.

[4] Wilkins and Hill (1995) argue that 'come' and 'go' are not lexical universals which manifest a universal deictic opposition. But the ways of saying COME that they found in the languages they investigated are similar enough to Wolof and English to support a Moving Time metaphor like the one we have seen here.

[5] Hanks (1990) calls this a *transposed* indexical ground. *Transposition* is a kind of *decentering*. I avoid using the lexeme *transpose* in this way because it is somewhat at odds with its ordinary English meaning.

[6] There are different senses of *fekk* with different valences that do not affect the argument here. See Moore 1997a. In the valence we are considering here, all three arguments -- the mover, the location, and the entity that the mover becomes co-located with -- are obligatorily expressed in most contexts. There is, however, the possibility that the locational argument of *fekk* can be omitted if it is specified in the context. The requirement for that argument can also be satisfied by the andative suffix. These facts are consistent with the account given here.

[7] The imperfective marker — *di* or *-y* — appears directly to the left of the verb that it modifies. *-y* is a left-leaning clitic. It is attached to the object pronoun *ma* in example 15. Some verbs whose unmarked construal is past/perfective can refer to the present when they appear with imperfective marking (cf. Diouf 1998, Robert 1991, Sauvageot 1965).

[8] The Amharic verb for "smell" is also transitive in this way (Amberber 1997).

[9] There are uses of *fekk* in which the object is depicted as being in a state or doing an activity. These uses need not mention location. See Moore 1997a.

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3

Point of view and the FRONT/BACK opposition in temporal metaphor

3.1. Introduction.

In this chapter we will look at how considerations of point of view figure in the meanings of temporal expressions that involve Source-Domain vocabulary having to do with the FRONT/BACK dimension. The English temporal words *before* and *after* historically derive from words that had the spatial senses 'in front' and 'in the rear, behind' respectively (*Oxford English Dictionary* (OED), Traugott 1975:210).[1] The word *before*, for example, still has spatial uses which can be paraphrased as 'in front of', as in the ambiguous noun phrase, *The tent city that students erected before California Hall.* On the intended spatial reading, the students erected a tent city on the lawn in front of a building called California Hall. On the whimsical temporal reading, this phrase would refer to a tent city that the students erected before they erected California Hall.

I will use the words *before* and *after* to introduce the discussion of how a word meaning 'in front' (i.e., a FRONT word) or 'behind' (a BACK word) can instantiate the Moving Time metaphor. I am using the words FRONT and BACK in small capitals as general terms for spatial concepts, even though in some cases the part or region in question would not be called *back* in English. For example, the spatial use of *after* that we will discuss below is glossed 'behind a moving entity'. Expressions like *in front of* and *behind* in their motion uses are conceptually closely related to words like *front* and *back* in their 'part of an object' uses because moving things can be talked about has having fronts on the side that is in their direction of motion and backs on the other side (cf. Fillmore 1997/1971).

The words *before* and *after* in an earlier stage of English productively had both spatial and temporal meanings. At that stage they can be analyzed as instantiating the Moving Time metaphor. By way of illustration, here are two examples of *after* from the OED. (The year and page number are given below each example.) The first is a physical motion use in which two people are riding along, one behind the other. The second is a temporal use. Data like

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these support the plausibility of the hypothesis that the Moving Time metaphor historically motivated temporal uses of the word *after*.

1) a. *After whom rode on Horse-back a Courier of the Republick.*
(1707. p. 166.)

b. *They are not good to be taken after meat.*
(1620. p.167)

Examples such as 1b above are analyzed as instantiating the Moving Time metaphor because the direction of metaphorical motion is the same as it is in the Ego-centered case with examples like *arrive* and *come*: in both cases, the earlier time corresponds to the object that is farther in the direction of motion. In order to exemplify this point I will return to Present Day English and use the word *follow*, which instantiates the Moving Time metaphor with the same kind of schema that is involved in the case of *after*, in which one thing is moving behind another.

Imagine a situation in which someone might say both *Christmas is coming* and *New Year's is coming*. Here, one could also say *New Year's follows Christmas* or *New Year's is after Christmas*. These relationships can be visualized with the help of Diagram 3.1 below. Since Christmas and New Year's are construed as objects which are metaphorically moving from a place that maps onto the future toward a place that maps onto the present, the region that is farther in the direction of motion corresponds to the earlier time. Focusing now on the relationship between Christmas and New Year's, we see that Christmas corresponds to an entity that is further in the direction of motion than the entity that corresponds to New Year's. When two physical entities are moving on the same path in the same direction, the one that is farther in the direction of motion is *in front* of the other one, and the one that is less far is *behind* (Fillmore 1997/1971). Thus, the entity that is *in front* maps onto an *earlier* time, and the entity that is *behind* maps onto a later time (Lakoff 1993, Lakoff and Johnson 1980, 1999).

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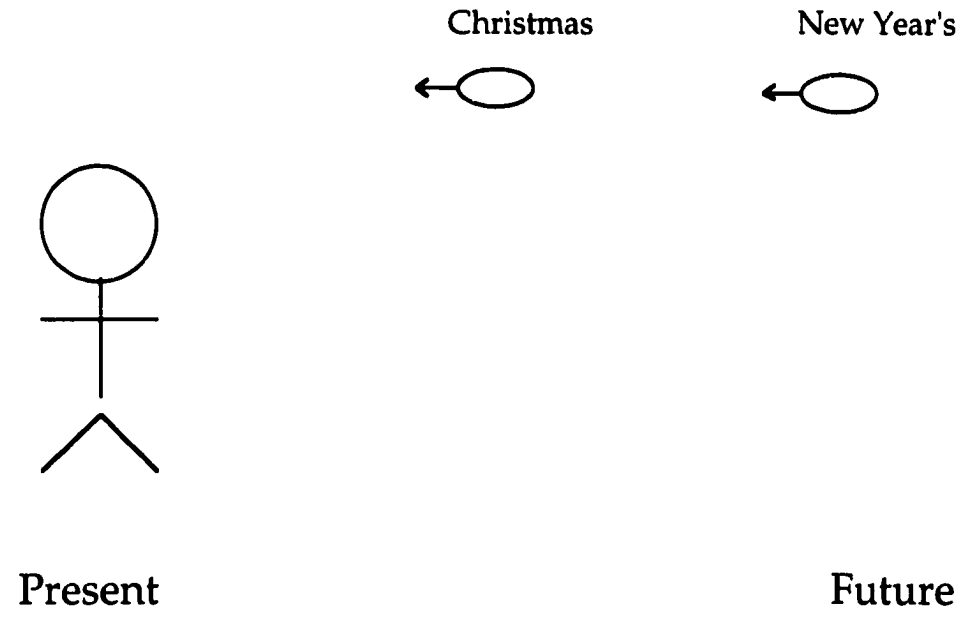


Diagram 3.1: Christmas is coming; New Year's is coming; New Year's follows Christmas.

Scholars have long noted that in addition to the Moving Time metaphor, there is a temporal metaphor in which the direction of motion is opposite to that of Moving Time. (Benveniste 1965, Bull 1971 /1960, Clark 1973, Fillmore 1997/1971, Fleischman 1982a,b; Lakoff and Johnson 1980, 1999, McTaggart 1993 /1927, Traugott 1973, 1975, 1978, 1985a). In this other metaphor, Ego is construed as moving toward the future, so that we can say things like *We are approaching the end of the millennium, We're heading toward the year 2000,* or *Let's set up a meeting when we get a little farther down the road*. This metaphor is called Moving Ego. In 2 below we see a Moving Ego expression and an Ego-centered Moving Time expression that are near paraphrases of each other. In example 2a below, Ego is construed as moving toward the future weeks (= Moving Ego), whereas in example 2b, the future weeks are construed as moving toward Ego (= Ego-centered Moving Time).

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In order to see that 2a instantiates Moving Ego, note that if "... the front/back orientation of an object is determined by whether the object is in motion, another way of saying 'in front' is 'ahead'" (Fillmore 1997/1971:45). Actually, it is not necessary for the object/entity to be in motion at the moment of speech for *ahead* to be appropriate. So for example, if I stop by the side of the road to ask for directions, someone can still tell me that a certain place is *a mile ahead* even though I am not moving. Nonetheless, the direction signified by the word *ahead* is the direction in which my destination lies, not the direction I am facing as I ask for directions, for example. It is not felicitous to use the word *ahead* to talk about a scenario in which motion is not involved. For example, one does not normally say *There is a flagpole ahead of the Federal Building* to mean that there is a flagpole *in front* of the Federal Building in a scenario that does not involve motion. Thus, physical motion *ahead* is used appropriately only in a scenario in which the RP of ahead is understood to be on its way somewhere (although it need not be actually moving). By the same token, the only plausible motivation for the appearance of the word *ahead* in 2a is the Moving Ego metaphor.

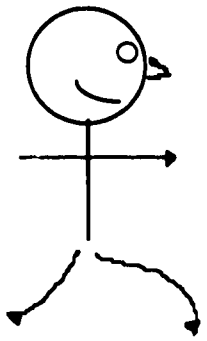
2) a. *I hope we get a chance to meet in the weeks ahead.* (Moving Ego)

b. *I hope we get a chance to meet in the coming weeks.* (Ego-centered Moving Time)

Although *follow* expressions like the one in 2c below instantiate the Moving Time metaphor, they differ from Ego-centered Moving Time expressions (e.g. 2b) in meaning and use more than do Moving Ego expressions like the one in 2a. Since temporal *follow* expressions have to do with metaphorical motion on the FRONT/BACK axis, I will call them FRONT/BACK Moving Time expressions. The three types of metaphor are diagrammed below.

2) c. *I hope we get a chance to meet in the following weeks.* (FRONT/BACK Moving Time)

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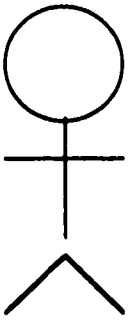
"Now" (RP)

Moving Ego (cf. 2a)

"The weeks ahead" (figure)

"The coming weeks" (figure)





"Now" (RP)

Ego-centered Moving Time (cf. 2b)

{"The week of the 22nd"/"This week"} (RP)



"The following weeks" (figure)



FRONT/BACK Moving Time (cf. 2c)

Diagram 3.2: Moving Ego, Ego-centered Moving Time, and FRONT/BACK *Moving Time.*

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The difference I want to call attention to is that 2b — like 2a — is the kind of sentence that is interpreted deictically, but 2c is not. Used in context, the phrase *the coming weeks* in 2b establishes the moment of speech — Ego's "now" — as the RP of *coming*. But the use of *following* does not establish "now" as a RP: For 2c to be felicitous, the RP must have been established previous to the utterance of 2c; for example: *I'm busy the week of the 22nd, but I hope we get a chance to meet in the following weeks.* It is possible for the RP of *following* to be the week that includes the moment of speech, but in such cases something other than the use of the word *following* establishes the RP in the discourse. This is exemplified in 2d below, in which *following* indexes prior discourse rather than directly indexing the moment of speech.

2) d. *I'm busy this week, but I hope we get a chance to meet in the following weeks.*

The examples in 2 show a fundamental difference between the two kinds of Moving Time metaphor. In Ego-centered Moving Time (cf. Chapter 2), temporal relations are understood relative to Ego's "now," whereas in FRONT/BACK Moving Time, temporal relations are not necessarily understood relative to Ego's "now." The first kind of temporal relation is point-of-view based and the second is neutral regarding point of view. Moving Ego, like Ego-centered Moving Time, encodes a point-of-view based temporal relation.

In this chapter we will examine FRONT and BACK words in Wolof and Japanese, and the experiential groundings for using these words in temporal metaphors, opening up the possibility of linguistic universals in this area. The investigation of Wolof and Japanese will illustrate a clear contrast in the semantics of point of view between FRONT/BACK Moving Ego and FRONT/BACK Moving Time (cf. Traugott 1975, 1978). Consequently we will be better able to see that in the respects considered, Ego-centered Moving Time patterns with Moving Ego, and FRONT/BACK Moving Time stands out as different. Thus, the Moving Ego vs. Moving Time distinction is not as important to the meaning of temporal metaphors as it might at first seem to be.

One of the central aims of this chapter is to find the right levels of generality at which to analyze temporal metaphors (Sweetser 1987). The

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superordinate notions *time* and *space* are overly general for characterizing the metaphors we are concerned with. The appropriate level of specificity is closer to that of the lexical framings involved in the metaphorical expressions themselves. Also crucial is a sophisticated theory of deixis, of the sort we saw in Chapter 2, that allows us to recognize decentering. Near the end of the chapter, we will look at data from a wide variety of languages that are predicted by the account offered and discuss some implications for a theory of conceptual metaphor.

As we investigate the temporal meanings of FRONT and BACK words, we will see further variation in how metaphor is associated with lexicon. Recall that in Chapter 2 we observed the case of *ñów* and *come* where Wolof and English have the same metaphor paired with a highly similar word. Then we saw the case of *fekk* 'become co-located with' vs. *find* where highly dissimilar words were paired with essentially the same metaphor. The phenomenon we look at in this chapter is familiar from polysemy studies: words with similar Source-Domain semantics are paired with different metaphors (Lakoff 1987, 1993; Lakoff and Johnson 1980, 1999; Sweetser 1987, Taub 1996, etc.), and thus have different meanings in their Target-Domain uses.

3.2. FRONT/BACK expressions in Moving Ego and Moving Time.

The way FRONT or BACK words predicate spatial and temporal relations is different from what we saw in the case of COME in Chapter 2. Since the notion COME inherently involves movement toward a deictic center, we would expect temporal uses of COME to involve temporal change (corresponding to movement) as well as deixis, and they do. By contrast, the notions FRONT and BACK do not inherently involve either change of location or a deictic center, so they are appropriate for coding nondeictic relations between times which do not get earlier or later with respect to each other. This is one thing that FRONT/BACK terms do when they instantiate the Moving Time metaphor. Additionally, FRONT/BACK terms are also appropriate for coding deictic relations in either the Moving Time or the Moving Ego metaphor, as we will see.

FRONT/BACK words tend to be associated with Moving Ego in Wolof and with Moving Time in Japanese. In this section we will see that Moving Ego (as instantiated with FRONT/BACK words) is point-of-view based, and

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FRONT/BACK Moving Time is point-of-view *neutral*. The neutrality of FRONT/BACK Moving Time can be illustrated with the words *before* and *after* in English — just about any kind of event can be talked about as being before or after any other event; for example, *Amenhotep was born before Tutankhamon; My father was born after the great depression; Harry called after dinner; I saw the movie before I read the book; It began to rain after the party started.* Although English speakers may not feel a spatial nuance in temporal uses of *before*, they nonetheless have conceptual access to the FRONT/BACK Moving Time mapping, since the phrase *in front of that* can be used to mean 'before that', as in the next example, which comes from a KPFA radio broadcast. This sort of example is not heard in ordinary conversation but it is readily comprehensible to the native speaker.

3) b. *"Si quieres venir ven" with the Orquesta Sublime from the late 1950s, great charanga number there. In front of that we heard "Abaniquitos" from 1949 ....* [I.e., '... *before* that we heard "Abaniquitos"....']

We now turn to the Wolof and Japanese data. The Wolof and Japanese words for 'front' are presented first. We will see a considerable degree of overlap in their semantics, which suggests that the differences in their temporal meanings have more to do with which metaphor they instantiate than with their inherent lexical structure.

The Wolof noun *kanam* 'face, front, space ahead'

'Face'

4) a. *Ku la gajj ci kanam?*
who 2.OBJ scratch LOCPREP face
'Who scratched you on the face?'
[Fal, Santos, and Doneux 1990 under *gajj*.]

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'Front of something' or 'Space in front of something'

b. *Dafa lay ci kanamu oto bi*
SFOC.3 be.foggy LOCPREP KANAM:PD car the
i) 'The windshield is fogged up.'
ii) 'It's foggy in front of the car.'

'Space ahead of something'

c. *Bal bu ñuul bi mungi ci kanamu*
ball REL be.black the 3:PRSNTTV LOCPREP KANAM:PD
bal bu weex bi
ball REL be.white the
'The black ball is ahead of the white ball.' (In an imagined context in which two electronic balls are racing around in circles.)

'Future'

d. *Maangi ñów ci kanam tuuti*
1:PRSNTTV come LOCPREP KANAM little
'I'm coming in a little while.'
[Q:64]

Temporal uses of *kanam* tend to have Ego's "now" as their RP, as in 4d above. That is, temporal *kanam* virtually never occurs in a context where it is not *deictically anchored*. (Decentered deixis counts as deixis.) Also, consultants do not accept unanchored examples of *kanam*. I have, however attested one exception to this generalization (which we will discuss below). Questions of deixis aside, the temporal relation that *kanam* refers to is without exception 'later than'.

The following example, involving the motion verb *dem* 'go', is evidence that it is the Moving Ego metaphor that motivates the 'future' meaning of *kanam*.

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4) e. *Li ci gannaaw, xam nga paase nañ ko.*
REL LOCPREP back know PERF.2 go.beyond PERF.1.PL 3.OBJ
Léegi ñungi dem ci kanam.
now 1.PL:PRSNTTV go LOCPREP front
"That which is in back, you know we've passed it. Now we're going ahead." (The speaker is explaining his metaphorical orientation to temporal experience, with the past behind him and the future in front, in which he is metaphorically moving forward.)
[s L, Ba:109]

The Moving Ego metaphor constitutes an ordinary way of framing temporal experience in Wolof. The metaphor employs the range of vocabulary we would expect it to, given that it is grounded in experiences of movement on a path. An example of this is given below.

5) *Déwén, ñungi ci jëm, àggaguñu.*
next.year 1.PL:PRSNTTV LOCPREP head.for arrive:yet:NEG.1.PL
"Next year, we're headed for it; we haven't arrived yet."
[s T, An:117]

The Japanese noun *mae* 'front, space ahead' is very similar to *kanam*. One difference is that *mae* does not have 'face' as one of its senses, although it may be historically derived from a word meaning 'eye' (K. Hirose 1990:3, Matsumoto 1999:21fn).[2]

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The Japanese noun *mae* 'front, ahead'

'Front of something'

6) a. *Syoouindoo no mae ga yogoreteiru kara huiteokundayo.*
show.window GEN MAE NOM dirty:state ABL wipe:IMPR
"Because the show window's *mae* is dirty, wipe it."
'Wipe the show window because it's dirty.' (I.e., the front surface of the window is dirty.)
[K. Hirose 1990]

'Space in front of something'

b. *Syoouindoo no mae ga yogoreteiru kara haiteokundayo.*
show.window GEN MAE NOM dirty:state ABL sweep:IMPR
"Because the show window's *mae* is dirty, sweep it."
'Sweep the area in front of the show window because it's dirty.'
[K. Hirose 1990]

'Space ahead of something.'

c. *Taroo no booru ga Dan no booru yori*
Taroo GEN ball NOM Dan GEN ball from/than
mae o nagareteiru.
MAE ACC float:STATIVE
"Taro's ball is floating more *mae* than Dan's ball."
'Taro's ball is floating ahead of Dan's ball.' (The invented context is that each of two people has a ball that is floating along in a stream.)
[YH]

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'Space in front/ahead' or 'earlier'

6) d. *Taroo ga nageta booru wa Dan ga nageta booru yori*
Taroo NOM threw ball TOP Dan NOM threw ball from
mae ni otita.
front LOC fell
'The ball that Taroo threw fell {ahead of/before} the ball that Dan threw.'
(I.e. 'farther in the direction of motion' or 'earlier than'.)
[YH]

The above sentence is a good example of an utterance in which the temporal relation is not deictically anchored. Uses of mae that are not deictically anchored are quite ordinary.

It might be objected that there is a significant difference between the lexical semantics of *kanam* and *mae* that would account for the fact that *kanam* is conventionally associated with the Moving Ego metaphor — the fact that in one of its uses *kanam* denotes the human face. However, there are cases where a word refers to the human face in one of its uses and to a temporal relation in another, and the temporal use is not necessarily deictically anchored. According to Voorhoeve 1962:51 (cited in Traugott 1978), in Sranan the word *fesi* means 'face', and the word for 'before' is also *fesi*, as in the following sentence.

7) *Da wan wityi a fesi da m go tai masra A ...*
'Then one week before then I went tell mister A ... '

Since the Sranan word *fesi* did not have to lose the meaning 'face' in order to acquire nondeictic temporal semantics, there is no reason to assume that having a 'face' use precludes *kanam* from developing nondeictic temporal uses.

Next we look at the Wolof noun *gannaaw*.

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The Wolof noun *gannaaw* 'back, behind'

'Back' (the body part)

8) a. *Àlluway xànjar ju ñu bind ci ginnaaw.*
tablet:PD tin REL 3.SUBJ write LOCPREP back
'A tablet of tin covered with verses on [his] back.' (*Ginnaaw* is a variant of *gannaaw*.[3])
[Dieng 1993:240]

'The back of something.'

b. *Kayit waangi tafu ci gannaaw garab gi.*
paper the:PRSNTTV be.stuck LOCPREP back tree the
'The paper is pressed up against the back of the tree.' (E.g., by the wind. The BACK of the tree in this example, in Wolof as in English, is the side away from where the tree is being viewed.[4])
[AK, Gao:43]

'Space behind a stationary entity.'

c. *Big bi mungi ci gannaaw bwat bi.*
pen the 3:PRSNTTV LOCPREP back box the
'The pen is behind the box.' (The Wolof sentence has the same appropriateness conditions as the English gloss: The box is between the speaker (or other deictic center) and the pen. Cf. Robert 1997.)
[Q:62]

'Space behind a moving entity'

d. *Bal bu ñuul bi mungi ci gannaaw*
ball REL be.black the 3:PRSNTTV LOCPREP GANNAAW
bal bu weex bi.
ball REL be.white the
'The black ball is behind the white ball.' (Appropriate in a situation in which the BEHIND relation is determined by direction of movement.)

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'Past'

8) e. *Juróom-fukki at sa gannaaw la woon.*
fifty:PD.PL year LOCPREP:DIST back NONSUBJ.FOC.3 PAST
"It was fifty years at back."
'It was fifty years ago.' (The forms *si* and *sa* are variants of the locative preposition *ci/ca*.)
[att.] [d K, An:6]

This last example is typical of Moving Ego uses of the noun *gannaaw* in that it was deictically anchored in its context of utterance.

Next we look at the Japanese noun *ato*.

The Japanese noun *ato* 'Space behind a moving entity'

'Space behind a moving entity'

9) a. *Siroi kuruma wa kuroi kuruma no ato ni*
white car TOP black car GEN ATO DAT
tuzuiteiru
follow/continue
'The white car is following behind the black car.'

b. *Syokuzi no ato de ha o migaita*
meal GEN ATO LOC teeth ACC brush:PAST
'After a meal, [I] brushed my teeth.' (Almost anything could be said to happen after a meal with this construction.)
[KK]

Ato, like *mae*, is unmarked in uses that refer to temporal relations that are not deictically anchored. Although *ato* and *gannaaw* have rather different polysemy structures, *gannaaw* has a 'space behind a moving entity' use like *ato* does. Thus, although *gannaaw* has not developed a temporal use like that of *ato*, in principle it could, given its lexical semantics.

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The lack of deictic restriction on mae *and* ato *vs. the restriction on* kanam *and* gannaaw.

The property of temporal uses of Japanese *mae* and *ato* that is crucial to the argument here is that they can be used to locate virtually any two events or times relative to each other: The RP of *mae* or *ato* may be any arbitrary time or event, or it may be the moment of speech. This contrasts with Moving Ego uses of Wolof *kanam* and *gannaaw*, which refer to events or times relative to a deictically structured frame of reference. Here are some further examples of *mae* and *ato*. The example in 10a depicts the sequence of two arbitrarily chosen events that do not have any particular relationship to each other. The example in 10b has the moment of utterance as its RP.

10) a. *Mati ni iku mae ni ki ni nobotta.*
town DAT go MAE DAT tree DAT climbed
'Before I went to town, I climbed a tree.'
[KO]

b. *Mae ni asonda koto ga aru.*
MAE LOC played fact NOM exist/have
'We have played (before).'
[YH, 1996]

Below is an example of *ato* in which its RP is the moment of utterance in the imagined context.

c. *Basu ga kuru node, ato ni sitekudasai.*
bus NOM come because, ATO DAT do:POLITE:IMPR
'The bus is coming, so please make it later.' (The situation is that one of the speaker's students has approached her at a bus stop and asked her a question.)
[KO]

In 4d-e and 8e above we saw examples of prototypical uses of Moving Ego expressions employing Wolof *kanam* 'front' and *gannaaw* 'back'. Those

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uses are prototypical in that the temporal relations that *kanam* and *gannaaw* are used to talk about are deictically anchored in their contexts of occurrence -- i.e., the moment of speech is the RP in the temporal relation referred to.

Less prototypical uses are those in which the indexical ground is decentered. The following examples show for *kanam* variation from the prototype of the same sort we saw in Chapter 2 with *ñów* and its English translation *come*. In other words, there is a sort of cline from uses that are grounded in the "here and now," to uses that are grounded in the "here and now" of an imaginary experiencer, to cases in which the conceptualizer supplies the RP of *kanam* but does not necessarily imagine a person at that RP. Below is a straightforward example of decentering, where *kanam* is used to talk about a time in somebody's future. (A lot of work has been done on decentering in narrative; cf. e.g., Almeida 1995, Banfield 1982, Chafe 1994, Fauconnier 1997, Fleischman 1990, Zubin and Hewitt 1995:137.) The (fictional) context of 11a is that a child refuses to obey an adult, and the adult tells the child that someday he will suffer the consequences of not obeying. Then one day the child gets in a fight and the adult lets him get beaten. In describing this scenario, the adult said:

11) a. *Xale bi bu xamoon ne dinañ ko duma*
child the, if know:PAST COMP FUT.3.PL 3.OBJ beat
ci kanam ...
LOCPREP KANAM
'If the child had known that he would be beaten later (literally: 'at front')....' (In this example, the speaker is saying that if the child had known what would happen to him in the future, he would have obeyed the adult.)
[s T]

In 11a above *ci kanam* means 'in the future' relative to the "now" of the imaginary participants in the narrative. Example 11b below is a case of radical decentering (cf. section 2.3).

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11) b. *[<Bu> tisbaar paasee], ci kanam*
when early.afternoon.prayertime go.beyond:ANT LOCPREP KANAM
tuuti rekk, ë, kii ñów, tàkkusaan.
little only, uh, this.thing come, late.afternoon.prayertime
"When the early afternoon prayertime has passed, just a little bit ahead, uh, this thing comes — the late afternoon prayertime."
'When the early afternoon prayertime has passed, just a little later, the late afternoon prayertime comes.'
[sG]

In 11b there is no particular imaginary participant whose "now" serves as a RP. Nonetheless, a fictive point of view is established through a process of decentering like that described for *ñów* and *come* in section 2.3. Among the devices contributing to the establishment of this point of view is the *bu* 'when' phrase (marked off with square brackets), which sets a scene (mental space) that can be elaborated in the discourse.

The scene that is set up with the *bu* 'when' phrase contains an imaginary RP relative to which *tisbaar* 'early-afternoon prayertime' can be said to pass. This same RP also serves as the RP of *kanam*. The phrase *ci kanam tuuti rekk* 'just a little ahead' sets up a new fictive viewpoint which becomes the RP of *ñów* 'come' in the last clause of the example. This shifting viewpoint is essentially the same phenomenon that has been identified in narrative studies as a fictional "now" that gets later and later (metaphorically moves forward) as a story unfolds (cf. Almeida 1995, Banfield 1982, Fauconnier 1997, Fleischman 1990, Zubin and Hewitt 1995:137).

A case of a fictive viewpoint is discussed by Talmy (1988:188; although he does not use the term there) under the heading of *perspectival mode* with respect to examples like *There are houses at various points in the valley* and *There is a house every now and then through the valley*. In the first case the viewpoint would be veridical if the observer were looking at the valley, fictive otherwise. In the second case a fictive viewpoint is assumed in which the observer is walking through the valley.[5]

In the case of *kanam* as in the case of *ñów*, modes of understanding temporal relations that are essentially deictic are employed relative to a

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decentered indexical ground. To see this point more clearly let us have a look at what cannot be said with *kanam*. The negative example in 12 below shows that *kanam* cannot be used to directly relate a figure to a RP; that is, there has to be a role in the predicated relation for Ego, even if this only amounts to a fictive viewpoint. (To some extent the case of *gannaaw* is parallel, but the discussion is complicated by the fact that *gannaaw* has 'later than' uses that are motivated by concerns we have not discussed yet. *Gannaaw* will be the topic of the next chapter [= 4]. Cf. also Robert 1997.)

12) *?Tàkkusaan mungi ci kanamu/gannaaw*
late.afternoon.prayertime 3:PRSNTTV LOCPREP front:PD/back
tisbaar.
early.afternoon.prayertime
"The late afternoon prayer is in front/back of the early afternoon prayer." [The marker of a possessed entity, *-u*, glossed PD, regularly fails to appear after rounded vowels and *w*. Thus the *kanam* and the *gannaaw* versions of this example instantiate the same grammatical construction.]
Intended: The late afternoon prayertime is before/after the early afternoon prayertime.
(The example does not have any interpretation at all.)
[AK]

Compare 12 above to the well-formed Japanese example in 10a, *Mati ni iku mae ni ki ni nobotta* 'Before I went to town, I climbed a tree.'

Thus, Moving Ego metaphors in Wolof that use the words *kanam* 'front' or *gannaaw* 'back' have a very strong tendency to be deictically anchored, while Moving Time metaphors in Japanese that use the words *mae* 'front' or *ato* 'space behind a moving entity' have no tendency to be deictically anchored. This is interesting because it is a semantic generalization based on metaphor that covers phenomena that in principle could be independent of metaphor. As we will see, the facts are well motivated by the experiential groundings of the Moving Ego and FRONT/BACK Moving Time metaphors. Note also that the generalization is stated not purely in terms of

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what a metaphor can mean, but rather in terms of the meanings of expressions involving particular words that instantiate the metaphor.

As has been noted by previous authors (e.g. those cited on page 67), while it is true that we have to specify lexical facts in order to understand how metaphors work, it is also true that there are cases in which we have to specify metaphor facts in order to be able to characterize the meanings of a word. This is the case with the temporal interpretations of *mae* and *kanam* whose opposite temporal senses are striking in comparison with their otherwise similar semantics. Similar comments also apply to the different interpretations of the word *ahead* in English, as in the phrase *move the meeting ahead*, which can refer to making a meeting either *earlier* or *later*. (Lakoff and Johnson 1999).

An exception

The generalizations made above about *kanam* are extremely robust, supported by the judgments of several consultants, my field observations, and published texts. However, I have attested an exception in spontaneous use:[6]

13) *ci* *kanam* *fajar*
LOCPREP KANAM dawn
"in front of dawn"
'from dawn on'

This example calls to our attention the fact that language use varies from speaker to speaker, and reveals the inadequacy of trying to characterize all of language with rules (Hanks 1996a, Hopper 1998). I believe that what accounts for the example is that the speaker took *fajar* 'dawn' as a fictive viewpoint. This assumption preserves the generalization that *kanam* is regularly associated with the Moving Ego metaphor, since FRONT still signifies 'future'. This question will be discussed further in Chapter 5 which is specifically dedicated to variability in construal and viewpoint.

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A generalization

Based on what we have just seen, the following generalization is valid for at least Wolof and Japanese (and English). Near the end of the chapter a crosslinguistic prediction will be offered based on this generalization.

The deictic contrast between FRONT/BACK Moving Ego and FRONT/BACK Moving Time:

If FRONT is associated with 'later' and BACK with 'earlier' (i.e., Moving Ego), the expressions in which FRONT or BACK occur tend to be deictically anchored. If FRONT is associated with 'earlier' and BACK with 'later' (i.e., Moving Time), no predictions can be made regarding deixis (Cf. Clark 1973; Traugott 1975, 1978).

Now let us see how the facts captured by the above generalization are motivated by the relevant experiential groundings.

3.3. Experiential groundings and mappings.

In this section I will present a proposal according to which the deictic contrast between FRONT/BACK Moving Ego and FRONT/BACK Moving Time expressions is predicted by the contrasting experiential motivations of the Moving Ego metaphor and the version of the Moving Time metaphor that is instantiated with FRONT/BACK vocabulary. This section will give an account for the first time within metaphor theory of the fact, observed by Traugott in 1975, that FRONT/BACK temporal terms are used to talk about temporal relations that obtain independently of their relation to the moment of utterance.

The experiential grounding for the Moving Ego metaphor is a potentially universal type of experience that occurs in everyday life, in which there is a salient correlation between a spatial and a temporal facet of experience. Moreover, the grounding scenario is a good example of the Target-Domain scenario.

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The experiential grounding of the Moving Ego metaphor.

Grounding scenario for Moving Ego:

Ego is moving forward. She expects to arrive at some place ahead of her. After a while she arrives and her expectation is realized. Then she continues on her way and the place is behind her.

Target-Domain scenario of Moving Ego:

Ego imagines a time in the future and expects it to occur. After a while it occurs and her expectation is realized. After that, the time is in the past.

The following sentence could be said in an experience of the grounding scenario.

14) *There's trouble ahead.*

Example 14 above, in the context indicated, means both that i) there is a troublesome situation located on Ego's path ahead of her, and ii) trouble will occur in Ego's future. This is a *combined simultaneous interpretation* (cf. section 2.2) in that the expression has both the spatial and the temporal meanings at once. The two meanings are distinct but they pertain to a single understanding of the situation referred to. The following Wolof example has a combined simultaneous interpretation analogous to that found in 14 above.

15) *Nañ dem ba si kanam.*
HORT.1.PL go to.the.point.of LOCPREP KANAM
"Let's go until at ahead." [*si* = *ci*]
'Let's keep going for a ways' and 'Let's keep going for a while.'
[att.] [d K]

Next is exemplified a combined simultaneous interpretation for Wolof *gannaaw* 'back'. The context for the example is that the speaker and the addressee (in a narrative) have been walking through the countryside looking for a place to found a town, and the speaker believes he has already seen the appropriate place a ways back.

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16) ... *Makaan bi daal, ci* <u>*gannaaw*</u> *laa*
place the EMPH LOCPREP GANNAAW NONSUBJ.FOC.1
ko gis.
3.OBJ see
"The place — it was in back that I saw it."
'It was back there/then that I saw the place.'
[s T]

The examples of combined simultaneous interpretation show the salience of the experiential correlation between translational motion on a path and the times at which the mover is located at particular points on the path. This is because the expressions refer directly to the Source-Domain concept and also metonymically to the Target-Domain concept. There is an additional possibility for the English sentence in 14, *There's trouble ahead,* (and for the isolated locative clauses in the Wolof examples), which is that they could be used in a situation in which a metonymic reading was no longer available; in this case the only interpretation would be metaphorical.

Examples like 14 thus show the emergence of a conceptual mapping in a metonymic/indexical context and the subsequent extension of the mapping to a context in which it is no longer metonymic but metaphorical (cf. Heine, Claudi, and Hünnemeyer 1991a,b; C. Johnson 1999a, Grady and Johnson 1997). The following sentence exemplifies this process for Wolof — though 17 below is usable in a context where its interpretation would be metonymic and not metaphorical, it is also usable in a context in which it could only be interpreted metaphorically. The Wolof example in 17, like its English gloss (*When we get farther down the road, you will see),* can refer to a physical event of arriving somewhere, or to the occurrence of a future time.

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17) *Buñ* *demee* *ba* *ci* *kanam*
when.1.PL.SUBJ go:ANT to.the.point.of LOCPREP KANAM
dinga *gis.*
FUT.2 see
"When we have gone until at front, you will see." "When we get farther ahead, you will see."
'When we get farther down the road, you will see.' 'Later, at a future point in time, you will see.' (E.g., the addressee will see that what the speaker had been saying is true.)
[AK, Ba:211]

The mapping for the Moving Ego metaphor is given in Table 3.1 below.

Table 3.1: The Moving Ego metaphor

SOURCE		TARGET
Space ahead of Ego.	→	Ego's future.
Ego's "here"	→	Ego's "now".
Ego's arrival at a place.	→	Occurrence of a time.
Co-location.	→	Simultaneity.
Space behind Ego.	→	Ego's past.
Increasing proximity of mover to goal.	→	Increasing immanence of the expected time.

A crucial aspect of the Moving Ego metaphor and its experiential grounding is that Ego's body plays the role of RP relative to which FRONT/BACK directionality is determined. Because of the presence of a *human* deictic anchor in the grounding scenario, the notion of FRONT in the metaphor is a rich one involving the side of Ego's body with which she perceives and interacts with the world (cf. Allan 1995, Vandeloise 1991). This contrasts with the FRONT/BACK Moving Time metaphor, as we will see below.

The FRONT/BACK Moving Time metaphor

The experiential grounding of the FRONT/BACK Moving Time metaphor is characterized below. This proposal is basically the same as one made by

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Svorou (1988, 1994), and hinted at by Heine, Claudi, and Hünnemeyer (1991a:66, 1991b). The grounding experience occurs every time two or more entities who are not traveling side-by-side are perceived to go someplace by the same route. This type of experience is salient because people often care about who gets to a particular place first, for example when competition for resources is involved.

Grounding scenario for FRONT/BACK *Moving Time*:

Two entities are going in the same direction on the same path. Wherever they go, the one that arrives first is in front of the one that arrives second (and the one that arrives second is behind the one that arrives first.)

Target-Domain scenario of FRONT/BACK *Moving Time*:

One event or time is earlier than another.

As is the case with all the experiential groundings we have discussed, the grounding scenario for FRONT/BACK Moving Time has a salient temporal dimension. Crucially the FRONT/BACK relation in the grounding scenario is determined by direction of motion independently of any particular viewpoint. This can be visualized based on the examples and diagram below.

18) a. *Pat got to the office ahead of Kim*

b. *Pat went ahead of Kim*
(Either 'Pat left first' or 'Pat was going along in front of Kim.' This example illustrates the fact that the experiential correlation is available even in situations in which the goal is not known.)

19) *Pam wa Kim no mae ni haitte itta*
Pam TOP Kim GEN MAE DAT enter:TE went
'Pam went in {earlier than/%ahead of} Kim.' (The per-cent sign indicates variation in native-speaker acceptability regarding the physical motion interpretation.)

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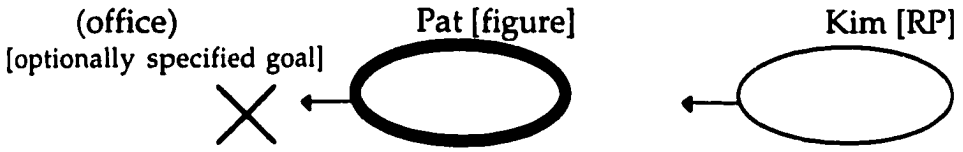


Diagram 3.3: The grounding scenario for the FRONT/BACK *Moving Time metaphor. Example:* Pat got to the office ahead of Kim.

I will call the physical relation between the two entities in the FRONT/BACK Moving Time grounding scenario *position*. An entity's position is its location on the path relative to another entity within a frame of reference determined by the direction in which both entities are moving. This frame of reference is sufficient to endow each entity with a front and a back (cf. Fillmore 1997/1971, Vandeloise 1991).

In the grounding scenario there is a salient correlation in experience between position on path and sequence of arrival at any goal: the entity that is *in front* regularly arrives *first*. This correlation motivates the metaphorical mapping from position to sequence. The correlation is pervasive in experience. The above sentences, from English and Japanese, illustrate the correlation. For English speakers, and for some Japanese speakers, there is a combined simultaneous interpretation. That is, the examples mean both that one person was ahead of the other and that one arrived before the other. In this case *'arrived ahead of'* is metonymic for *'arrived earlier than'*.[7]

The mapping for the FRONT/BACK Moving Time metaphor is presented below.

Table 3.2: The FRONT/BACK *Moving Time metaphor*

A physical entity farther in the direction of motion.	→	An earlier time.
A physical entity that is less far in the direction of motion.	→	A later time.

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Before we proceed, let me clarify something about how the mapping, which is stated in terms of times, can be instantiated in expressions that talk about events: It is possible to use a temporal metaphor to talk about sequences of events because of an indexical association between events and the times at which they happen. For example, I can say *The Linguistic Society of America conference is coming*. This is possible not because conferences per se are construed as moving entities, but because I am talking metonymically about the time that the conference is expected to occur (cf. Lakoff and Johnson 1999).

Moving Time and Moving Ego metaphors can be used to talk about either events or times (although, of course, what events can be talked about with the Ego-centered metaphors is constrained by considerations involving point of view; cf. Chapter 5). *A time* may be defined as '*when* an event can happen or a state can obtain' (cf. Lakoff and Johnson 1999). In addition, the notion of an event occurring (or a state obtaining) has the notion of *a time* built into it: the occurrence of an event entails a time when the event occurs (cf. Barwise and Perry 1983, Langacker 1987, Oaklander and Smith 1994). The notions of *a time* and *an event* are thus intertwined in our conceptual systems, and it is natural that they can be talked about with the same metaphors.

How the mappings predict the deictic contrast.

It is predictable that the Moving Ego metaphor structures FRONT/BACK expressions that tend to be deictically anchored. This is because the RP of the spatial relation that correlates with the temporal concept in the experiential grounding is Ego's body. In other words, the mappings FRONT → *later than* and BACK → *earlier than* are experientially grounded in a correlation between Ego's bodily orientation and the temporal order in which she encounters entities on a path. It is therefore intrinsic to the metaphor that Ego's point of view is associated with the RP.

This is in sharp contrast to the experiential grounding for FRONT/BACK Moving Time in which, crucially, Ego is *not* necessarily a participant. The correlation in the grounding scenario of FRONT/BACK Moving Time between position and sequence results from the fact that two entities are moving in the same direction on the same path. The correlation does not require that the movement be oriented in any particular way relative to Ego.

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The metaphorical mapping, like the grounding, is neutral with respect to point of view — it does not mention Ego. This neutrality with respect to point of view in the mapping for FRONT/BACK Moving Time motivates the neutrality with respect to deixis of expressions which instantiate the metaphor: Just as the grounding scenario essentially involves a relationship (not necessarily involving Ego's location) between two moving entities, the Target-Domain concept has to do with a relationship between two times, not necessarily involving Ego's "now". Previous analyses of FRONT/BACK Moving Time expressions as instantiations of the Ego-centered Moving Time mapping (Haspelmath 1997, Lakoff and Johnson 1999, Yu 1998) do not predict this contrast automatically, since the Moving Ego and Ego-centered Moving Time mappings both construe temporal experience from Ego's point of view.

3.4. Crosslinguistic predictions.

In the previous section I made a generalization regarding deixis and the FRONT/BACK opposition in temporal metaphors in Wolof and Japanese:

If FRONT is associated with 'later' and BACK with 'earlier' (i.e., Moving Ego), the expressions in which they occur tend to be deictically anchored. If FRONT is associated with 'earlier' and BACK with 'later' (i.e., Moving Time), no predictions can be made regarding deixis (Cf. Clark 1973, Traugott 1975, 1978).

Starting from this generalization, the following crosslinguistic prediction can be made. This prediction is based on the very reasonable assumption that the semantics of temporal FRONT/BACK expressions are motivated by the experiential grounding of whichever metaphor structures that semantics. Since the pattern FRONT=EARLIER-THAN/BACK=LATER-THAN is grounded in a scenario in which point of view does not play a role, the equivalencies FRONT=EARLIER-THAN and BACK=LATER-THAN are predicted to appear in expression-types that do not require deictic anchoring.

20) *Predicted crosslinguistic tendency:*

If a FRONT or BACK expression-type means 'earlier than' or 'later than' and is neutral vis à vis deictic anchoring, FRONT will correspond to 'earlier than' and BACK will correspond to 'later than'.

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Before we proceed we should briefly discuss how my prediction would be affected by the existence of languages that construe the future as being in back of Ego. (Such languages have been claimed to exist by various scholars, including Alverson 1994, Dahl 1995, Klein 1987, Thornton 1987[8]). First, it should be pointed out that none of the claims in the literature is supported by sufficient evidence. No one has presented analyses which clearly show what the RP is for their data. By contrast, we are justified in saying that English construes the future as in front of Ego because of expressions like the one in 21a in which the RP of *ahead* is explicitly stated as *us*. The same point is made for Wolof in 21b.

21) a. *We have an interesting week ahead of us.*

b. *Mungi suñ kanam*
3:PRSNTTV our front
'It's in front of us'; 'It's in the future.'
[att.] [d K, Xi:55]

Aymara (South America) is sometimes cited as an example of a language that construes the past as being in front of Ego (Lakoff and Johnson 1999, Miracle and Yapita Moya 1981). The evidence given includes sentences that resemble the Japanese example 9b above (*Mae ni asonda koto ga aru* 'We have played before'), in which a FRONT word is used to refer to the past. But in Japanese, if *mae* 'front' appears with a RP that is construed as a human experiencer it does not have a 'past' meaning. Consider the following example.

22) *Kurisumasu wa moo me no mae da.*
Christmas TOP now eye GEN front COP
"Christmas is now in front of the eye."
'Christmas is close at hand.' [I.e., in the near future.]
[YH, 061398]

It is sometimes implied that the fact that the FRONT word in Aymara also means 'eye' is suggestive of a metaphor in which the past is in front of

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Ego (Lakoff and Johnson 1999:141). Since many languages (possibly including Japanese) have EYE as an etymological source for 'front' (cf. Heine et al. 1993), the EYE/FRONT polysemy in Aymara is not particularly suggestive.

Another piece of evidence that the past is not in front of Ego in Japanese despite the fact that it is referred to with the word *mae* 'front' is that Japanese speakers gesture to the back when using *mae* to refer to the past (Kazuko Shinohara i.p.c. Feb. 1999). However, it is in the realm of gesture that evidence is beginning to appear that Aymara speakers construe the past as in front of them and the future as behind them: There is convincing videotaped documentation of Aymara speakers gesturing to the front when speaking of the past and to the back when speaking of the future (Núñez 1999; i.p.c).

In any case, the existence of languages that construe the past as in front of Ego and the future behind would not affect the prediction in 20, repeated and augmented in 23 below. The reason is that the prediction is based on the deictic neutrality of the FRONT/BACK Moving Time metaphor and has nothing directly to do with the point-of-view based notions *future* and *past*. The prediction of the corollary tendency given below in 23b does, however, depend on the assumption that the future is in front of Ego and the past is behind. I would not make the prediction in 23b for a language in which the past were in front of Ego and the future behind her.

23) *Predicted crosslinguistic tendency:*

a. If a FRONT or BACK expression-type means 'earlier than' or 'later than' and is neutral vis à vis deictic anchoring, FRONT will correspond to 'earlier than' and BACK will correspond to 'later than'.

b. A corollary to tendency (a), assuming that the future is metaphorically in front of Ego and the past is behind her, is that if a FRONT expression means 'later than' or a BACK expression means 'earlier than', it will be deictically anchored.

c. Where there is an expression in a language that *contradicts* tendency (a), the more common, less marked, way of saying 'earlier than' or 'later than' in that language will *conform* to tendency (a).

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In order to get a good idea of what is being predicted here, let us have a look at what a counterexample would look like. A strong counterexample would be something like "*Pat left* BACK *Kim ate dinner*" meaning 'Pat left before Kim at dinner'.

I have found two counterexamples to the prediction in 23a-b and none to 23c. The first counterexample (24a) is from Hausa, from a 1998 paper by Bernard Caron. Caron's data is consistent with the findings of Hill 1978 for Hausa, exemplified in 24b. (Hill's work will be discussed further in Chapter 5.[9])

Hausa

24) a. *Bà à san àbîn dà ya fâru à gàban rân nan ba*
'It is not known what happened after that day.' (lit. 'in front of')[10]
(*gàban* is a preposition derived from *gaba* 'front of the body').
[Caron 1998]

b. *ranar Talata tana gaba da ranar Littinin*
'Tuesday is in front of Monday.' (*gaba* 'front')
[Hill 1978:536]

Hausa does not, however, counterexemplify tendency 23c. That is, AFTER is also expressed in Hausa by the word *baayan* 'behind', and, according to Caron (1998), *baayan* 'behind' is more common in Hausa as a way of saying AFTER than *gàban* 'in front of'. (Cf. also Haspelmath 1997:57.) The variation exemplified for Hausa in example 24 and for Spanish in 25 is not surprising, since people have the ability to view situations from alternate viewpoints. The issue of variability in viewpoint will be the topic of Chapter 5, where I will offer a proposal for how the examples in 24 and 25 fit into a theory of deixis and temporal metaphors.

The other counterexample to 23a-b that I am aware of comes from Spanish:

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25) *Del quince para atras hay boletos, pero del quince para adelante, no hay.*
"From the fifteenth back there are tickets [available], but from the fifteenth forward there aren't."
'There are tickets available before the fifteenth but not after.'
[Oakland, California, September 99. Mexican speaker.]

Again, the tendency in 23c is not violated, because the ordinary ways to say BEFORE and AFTER in Spanish are *antes* and *despues* respectively. *Antes* is derived from Latin *ante* 'in front, ahead'; and *despues* is derived from Latin *post* 'after, behind', which conform to 23a.

The prediction in 23a is born out by the overwhelming majority of the data that I am aware of. I will mention data from Haspelmath 1997, Heine et al. 1993, and Svorou 1988. Haspelmath 1997 provides two kinds of evidence that conform to the prediction and no counterexamples. The first kind of evidence involves expressions that synchronically express not only what Haspelmath calls the *anterior* or *posterior* [temporal] semantic functions but also the spatial relations IN FRONT or BEHIND. Essentially, *anterior* means 'before' and *posterior* means 'after'. Haspelmath (p. 43) points out that expressions which encode the anterior or posterior function do not depend on deictic anchoring. Haspelmath provides twenty-five anterior/posterior expressions that conform to the prediction; i.e., expressions in which FRONT corresponds to 'earlier than' or BACK corresponds to 'later than' (p. 57). (He attributes this pattern to the Ego-centered Moving Time metaphor.)

The second kind of evidence that Haspelmath provides involves adpositions, which provide evidence that is relevant to the prediction in 23a because their syntactic function requires them to be able to predicate a relation between a figure and a RP regardless of whether or not the RP is deictically anchored; the words *before* and *after* are examples of this, as we have seen. Table 5 on page 61 of Haspelmath 1997 lists fifteen instances of "related spatial and temporal sequential adpositions." (Haspelmath cautions that a diachronic development from spatial to temporal is not firmly established for all cases.) The adpositions come from eleven languages. In all cases the predicted tendency is found: FRONT is associated with 'earlier' and BACK with 'later'.

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Further comparative evidence can be found in Heine et al. 1993, a reference work of data collected mostly from grammars. Most of the data come from African languages. The intent of the authors was simply to collect as much grammaticalization data as possible. Consistent with that, the sample does not seem to have been restricted in any way. The number of languages represented is indicated only as "several hundred" (p. 5).

In the Target to Source index, I looked up linguistic forms like *temporal marker* and got the following list of FRONT/BACK terms that develop into temporal forms. EYE, FACE, and FRONT, which I classify as FRONT terms; BACK and BEHIND, which I classify as BACK terms. I then looked these up in the lexicon and got the results presented below pertaining to FRONT/BACK terms that mean 'earlier' or 'later' in various languages.

I found seven FRONT terms, four meaning 'earlier' and three meaning 'later'. Two are adpositions, both of which mean 'earlier'. Of the three FRONT terms that mean 'later', one is a tense marker, one is a "temporal marker," and one is an adverb. The tense marker (p. 81-2) is consistent with my account because tense is a deictic category. The "temporal marker" example has a deictically anchored RP. The example is repeated below.

Shona (Hannan 1987:339)

26) *zvi-uya* *zvi-ri* *mberi-yo*
CL. 8-excellent CL. 8-be front-DEM
'Good things are ahead.'
[Heine et al. 1993:94]

The adverb example (*beogho*, from More; p. 94) does not contradict my proposals, since it means 'tomorrow', which is a deictic concept.[11]

There are nine BACK terms, seven of which mean 'later' and two of which mean 'earlier'. Of the nine terms, two are adpositions, and they both mean 'later'. Of the two terms that mean 'earlier', one is English *back* as in *three years back* meaning 'Three years ago'. Note that the word *ago* is deictic. In the other example, from Bulu (p. 20), the word for BACK is likewise translated with the deictic word *ago*. Thus, the data in Heine et al. 1993 support the prediction in 23a. These data also support the corollary for FUTURE=IN-FRONT/PAST=BEHIND languages. I did not find any counterexamples in Heine et al. 1993.

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Other work on the polysemy and grammaticalization of spatial grams also provides evidence on patterns of FRONT/BACK temporal use. Svorou 1988 surveys twenty-six randomly selected and genetically unrelated languages. Descriptions of the languages available to Svorou included 18 with spatial *grams* (i.e., adpositions, affixes, case inflections, or adverbs) meaning FRONT (p. 220). FRONT grams from eight of these languages have temporal uses (p.241). All eight of these languages have FRONT grams meaning 'earlier than', all of which are adpositions. None of the languages have FRONT grams meaning 'later than'. Descriptions of BACK were available for sixteen of the languages in Svorou's sample. BACK terms in ten languages had temporal uses. Six of the languages have BACK grams that mean 'later than', all of them adpositions. None of them have BACK grams meaning 'earlier than'. Thus all of the relevant data in Svorou 1988 support the prediction in 23a.

Svorou also provides support for the plausibility of the experiential grounding of the FRONT/BACK Moving Time metaphor proposed here and originally proposed by Svorou herself. In discussing the grounding scenario for FRONT grams she identifies what she calls an *anterior order* situation in which "... the [figure] and the [RP] are moving along a path in the same direction, as if in a procession. The [figure] precedes in order the [RP]" (p. 241). What is important for the purposes of this discussion is that the spatial and temporal meanings of FRONT grams are both present in the *anterior order* situation. Svorou gives examples of two languages, Bihari and Navajo, that use a FRONT gram to express the *anterior order* relation. I repeat the Bihari example here. (Although the FRONT word is glossed 'before', it is clear from the text and other examples that it has spatial uses.)

Bihari (Jha 1958:324)

27) a. *hama aha-sa aga pahucaba*
I you-ABL before
'I shall arrive before you.'
[Svorou 1988:241]

The use that corresponds to the grounding scenario for FRONT/BACK Moving Time with BACK grams is called *posterior order* by Svorou. She notes

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that it "... is the most frequent of the temporal uses[,] occurring in six grams in six languages" (p.267). Svorou's example, from Bihari, is given below.

27) b. *hamara-sa pachu rama ælaha*
me-ABL after Rama come.PAST
'Rama came after me.'
[Svorou 1988:267]

These data are consistent with my (and Svorou's) proposal for the motivation of the FRONT/BACK Moving Time metaphor. They show that several languages have constructions that are potentially interpretable as statements about both position and sequence, and in these constructions FRONT signifies 'earlier than' and BACK signifies 'later than'.

Summary

The tendency predicted in 23a is overwhelmingly supported by the sources I investigated, where I have found thirty-two[12] adpositions that conform to the predicted tendency. With the addition of the twenty-five cases of synchronic polysemy from Haspelmath 1997 mentioned above, that is a total of fifty-seven forms from the three sources, representing a variety of languages, that conform to the prediction. By contrast, I have found only two counterexamples to the prediction in 23a, and no counterexamples to the weaker prediction in 23c. The corollary prediction to 23a, that LATER=IN-FRONT and EARLIER=BEHIND expressions should tend to be deictically grounded, is also supported.

3.5. Summary and conclusions.

The results in this chapter have further demonstrated the importance of point-of-view in linguistic semantics, lexical description, and conceptual metaphor. This understanding would not be possible without a sophisticated understanding of deixis (Banfield 1982, Bühler 1990/1934, Emanatian 1992, Fillmore 1982b, Hanks 1990) which allows us to recognize decentered deixis.

In this chapter we have seen further evidence that experiential groundings of metaphors, which include certain kinds of potentially

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universal human experiences, have a pervasive effect on meaning in language — The structure of linguistic meaning is to some extent determined by aspects of human experience. In order for this evidence to be visible, however, it was necessary to give the Moving Time metaphor a new analysis, similar in important respects to the kinds of analyses proposed by Grady 1997a,b. One problem with previous analyses may have been that they assumed that temporal experience was necessarily based on an experience of "now." The experiential grounding of the FRONT/BACK Moving Time metaphor, however, reveals a kind of linguistically relevant temporal experience that is not saliently based on an experience of "now" (even though, of course, all experiences happen in the present). One result of this chapter, then, is that it reveals a way in which a priori philosophical assumptions can limit semantic investigation (cf. Lakoff and Johnson 1999).

The current chapter in fact has shown that there is more than one kind of experience that can be called experience of time. This is relevant to a question in philosophy that is currently being debated hotly: the question of whether time by its very nature involves tensed facts, or whether time can be characterized in a tenseless manner. The results of this chapter suggest that it should not be possible to resolve such a question since there is more than one phenomenon called time. Notice that this is not only a matter of different metaphors, but also of different direct nonmetaphorical experiences of the sort that serve as experiential groundings for metaphors.

The Moving Ego vs. Moving Time distinction is an obvious distinction in metaphorical structure and one that has been noted by many scholars. It turns out however that the Ego-centered vs. FRONT/BACK distinction *within* Moving Time is more significant for the questions of linguistic meaning we have been considering here. Since the distinction has specifically to do with FRONT/BACK words and how they figure in the categorization of experience, it can be argued that in order to understand the effects of conceptual metaphor on language we need a detailed understanding of lexical structure and lexically categorized experience. At the same time, it is clear from a comparison of the Wolof and Japanese words for FRONT — *kanam* and *mae* — that metaphor can be the mechanism of a lexical-semantic contrast (as has been noted by many scholars, see page 67).

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In the next chapter we will tackle a different facet of the FRONT/BACK problem — namely, the temporal meanings of the Wolof word *gannaaw* 'back'. We will confront the question of what motivates a 'later than' meaning for BACK in the absence of an 'earlier than' meaning for FRONT.

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Notes.

[1] As far back as the *Oxford English Dictionary* goes, *before* and *after* and the words they descend from had both spatial and temporal meanings.
[2] Ohara (née Hirose [1990:3]) suggests that the word *mae* is derived from the combination of *me* 'eye' and the directional suffix *e*. Matsumoto (1999:21fn) says, "It has been suggested that the locative nouns *mae* 'front' and *ushiro* 'back' may have developed from the body-part nouns *me* 'eye' and *shiri* 'bottom' plus a directional suffix."
[3] It is not uncommon to find *i* and *a* alternating before *n* in Wolof. Another example is *ginaar/ganaar* 'chicken'.
[4] On the notion of BACK as 'far side' see Clark 1973, Fillmore 1997/1971, Hill 1978, Levinson 1996b, Miller and Johnson-Laird 1976, Robert 1997, Vandeloise 1991.
[5] Cf. Talmy 1988:183 on *adoption of perspective*. Also, Talmy 1996:216 mentions the following under *Principal features distinguishing categories of fictive motion in language*: "The fictive effect is observer-neutral/observer-based -- and, if observer-based, the observer is factive/fictive and moves/scans...." Langacker 1991:501 discusses related phenomena under the heading *non-canonical viewing arrangement*. Also cf. Langacker 1987 on boundedness.
[6] When 13 (*ci kanam fajar* 'from dawn on') was uttered, I questioned the speaker (a monolingual) and there is no doubt that the speaker said it intentionally, intending it as glossed here. The example was rejected by other consultants.
[7] It is possible that the temporal meanings of *before* and *after* arose in this way.
[8] Several of these claims have been refuted in the literature: See Dunkel 1983 on ancient Greek, and Yu 1978 on Mandarin Chinese.
[9] It is hard to tell from Hill's articles how representative his data is of actual usage. See Chapter 5. (Hill 1978 does not mark tone.)
[10] This Hausa example is somewhat reminiscent of an English example like *They agreed to be friends from that day forward*.
[11] *beogho* is also said to mean 'the following day' which is not a problem for my account because the 'following day' meaning is probably derived from the 'tomorrow' meaning. Note that the word *following* is in the translation only and does not correspond to a formal part of *beogho*.
[12] If you add the numbers I have given, it comes out to 33 adpositions, but one of them was cited by both Haspelmath and Svorou.

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4

Conceptual mapping, polysemy, and linguistic practice: the temporal uses of *gannaaw* 'back' in Wolof[1]

4.1. Introduction.

In 1 below we see the symmetrical Moving Ego uses of *gannaaw* 'back' (example 1a, interpretation [i]) and *kanam* 'front' (1b) that we studied in Chapter 3, in which BACK corresponds to 'past' and FRONT to 'future'. Additionally, *gannaaw* 'back' has a 'later than' use as seen in 1a(ii). This use is the topic of this chapter.

From what we have seen so far, we would expect a BACK term that means 'later than' to be structured by the Moving Time metaphor, and this is generally what is assumed in the literature (Haspelmath 1997, Lakoff and Johnson 1999, Yu 1998). But an account in terms of Moving Time alone cannot adequately characterize the Wolof data. For example, Moving time is just as good a motivation for an 'earlier than' meaning of FRONT as it is for a 'later than' meaning of BACK, but it is impossible to use *kanam* 'front' in Wolof to mean 'earlier than' (cf. 1b-c). This asymmetry between *kanam* 'front' and *gannaaw* 'back' is one of the interesting descriptive and theoretical problems that the 'later than' use of *gannaaw* raises.

1) a. *Ci* *gannaaw* *la* *ñów.*
LOCPREP back NONSUBJ.FOC.3 come
"She came at back."
i) 'She came a while ago.' or
ii) 'She came afterwards.'

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b. *Mungi ñów ci kanam.*
3:PRSNTTV come LOCPREP front
"She's coming at front." 'She'll come later.' NOT She'll come beforehand.

c. *Ci kanam la ñów.*
LOCPREP front NONSUBJ.FOC.3 come
'She came in front.' This sentence does not mean anything like "She came beforehand ...."

The approach I take starts from the observation that 'later than' *gannaaw* — in contrast to the case of the FRONT/BACK Moving Time expressions discussed in Chapter 3 — tends to appear in a restricted set of contexts. The restrictions have to do with deictic and discourse considerations which provide a clue to the nature of the metaphor that underlies 'later than' uses of *gannaaw*.

The sort of context in which 'later than' *gannaaw* tends to appear is exemplified in 1a (interpretation [ii]) above, in which the RP of *gannaaw* is coded by zero. (The RP of *gannaaw* is the earlier event relative to which someone 'came afterwards'.) As is well known (Ariel 1990, Givón 1995), when a referent is coded by zero it is assumed to be accessible in the discourse. That is, the addressee is assumed to be able to identify the referent easily based on what has already been said or based on the situation of the speech act. Another example where the RP of 'later than' *gannaaw* is coded as accessible is given in 2 below. In 2, the RP of *gannaaw* is coded by the discourse-referential demonstrative *loolu*, which conventionally refers to something that precedes it in the discourse. In the text of the tale that preceded the example, the protagonist has just committed several horrible deeds, and it is *after these* that he is now described as bragging about them.

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2) *Ginnaaw loolu, Biram dellusi ca dëkk*
back DISCREF Biram return:VEN LOCPREP.DIST village
ba, taxaw ca digg pénc ma....
the.DIST stand LOCPREP.DIST middle gathering.place the.DIST
"Behind that, Biram came back to his village, stood in the middle of the public gathering place [and bragged about what he had done]...."
'After that, Biram came back to his village, stood in the middle of the public gathering place [and bragged about what he had done]....'
[Kesteloot and Mbodj 1983:113]

Next is exemplified a context in which the RP of *gannaaw* is established deictically. This is the ordinary, idiomatic way to say 'day after tomorrow' in Wolof, in which the RP of *gannaaw* is either *ëllëg* or *suba*, both of which are deictic words meaning 'tomorrow'.

3) *gannaaw ëllëg/suba*
back tomorrow
'day after tomorrow'

Now that we have seen examples of the sort of 'later than' *gannaaw* expression this chapter focuses on, let us see why 'later than' *gannaaw* cannot be characterized solely in terms of FRONT/BACK Moving Time.

4.2. The FRONT/BACK Moving Time metaphor does not predict the behavior of *gannaaw*.

The FRONT/BACK Moving Time metaphor is instantiated in Wolof with the words *jiitu* 'go ahead of' and *topp* 'follow'. Crucially, both the front direction and the back direction map onto temporal concepts, as we see in example 4 below.

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4) a. *Yëg a jiitu yëgle.*
find.out 3.SUBJ.FOC go.ahead announce
'Finding out precedes announcing.' (Proverb.)
[Cissé, Guèye, and Touré 1982:9]

b. *Yëglee topp (ci) yëg*
announce:3.SUBJ.FOC follow (LOCPREP) find.out
'Announcing follows finding out.'
[AK]

Given the symmetry displayed by *jiitu* and *topp* as they instantiate FRONT/BACK Moving Time, the default assumption would be that since *gannaaw* has a 'later than' use, it should at least be possible to use *kanam* to mean 'earlier than'. The comparison of 1a(ii) and 1c above illustrates the lack of an 'earlier than' meaning of *kanam*.

Leaving the issue of *kanam* aside, *gannaaw* exhibits behavior that is not consistent with what Moving Time would predict. We saw in section 3.2 that neither *gannaaw* nor *kanam* is used with ordinary locative syntax to predicate a sequential relation between two times. The example below is adapted from section 3.2.

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5) *?Tàkkusaan mungi ci gannaaw*
late.afternoon.prayertime 3:PRSNTTV LOCPREP back
tisbaar.
early.afternoon.prayertime
"The late afternoon prayertime is in back of the early afternoon prayertime."

Intended: The late afternoon prayertime is after the early afternoon prayertime.

[AK]

Moreover, Moving Time expressions with *topp* do not ordinarily have paraphrases with *gannaaw*. This is illustrated in 6 below.

Context (invented): The speaker has just said the Wolof equivalent of "That day, they gave us our diplomas." The example below is a possible continuation.

6) a. *Bis bi ci topp ñu dem mbumbaayi.*
day REL LOCPREP follow we go party:AND
'The following day we went out and partied.'

The next example is not a possible continuation of "That day they gave us our diplomas." Note the contrast with the case of English in which it is possible to use *after* as in 6b to paraphrase the expression with *following* in 6a.

6) b. *?Bis bi (ci) gannaawam ñu dem mbumbaayi.*
day REL (LOCPREP) back.3GEN we go party:AND

Intended: The day after, we went out and partied.

[AK]

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Another way of making this same point is to provide Moving Time FRONT/BACK expressions from other languages and show that they do not have ordinary-sounding literal translations in Wolof with *gannaaw*. Here are some examples from Japanese and English.

7) a. *Getuyoobi wa kayoobi no mae ni kuru*
Monday TOP Tuesday GEN front DAT come
'Monday comes before Tuesday.'

b. *Kayoobi wa getuyoobi no ato ni kuru*
Tuesday TOP Monday GEN behind DAT come
'Tuesday comes after Monday.'
[PKR]

c. *?Àllarba, (ci) gannaaw talaata la ñów.*
Wednesday (LOCPREP) back Tuesday NONSUBJ.FOC.3 come
Intended: Wednesday comes after Tuesday.
[AK]

At this point I hope to have shown that the FRONT/BACK Moving Time metaphor alone cannot fully account for the behavior of *gannaaw* as it is used to mean 'later than'. Before continuing with the investigation of 'later than' uses of *gannaaw*, it is appropriate to briefly look at some more general facts about *gannaaw* and how the 'later than' relation is expressed in Wolof.

4.3. Background on *gannaaw*.

Gannaaw has quite a range of uses, including 'back', 'space behind,' 'absence,' 'except,' 'in addition,' (causal/rhetorical) 'since,' (and various idiomatic uses), in addition to the temporal uses 'past' and 'later than'.

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Gannaaw is not primarily a temporal term. In a sample of two Wolof texts[2] totaling about 79,200 words, the most frequent use is the 'since' use, which accounts for about 24% of the tokens. The 'since' use is the subject of an insightful study by Stéphane Robert (1997).

Ordinary ways to say 'after' in Wolof do not involve *gannaaw*. An unmarked way to say that one event happened after another uses the *anterior* construction, in which the first event is referred to by a subordinate clause, as in example 8 below. This sort of construction, and not a use of *gannaaw*, is overwhelmingly found in texts to code the notion of one thing happening *after* another. (Additionally, *gannaaw* combines with this construction, as we will see.)

8) *Bi loolu am-ee, Mbaarik Bô daldi sol dàllam.*
when DISCREF happen-ANT Mbaarik Bô PRTCLE don shoes:GEN
"When that had happened, Mbaarik Bô put his shoes on."
'After that happened, Mbaarik Bô put his shoes on.'
[Diop 1995:78. Wolof spelling has been normalized. The translation in single quotes is from the original, p. 104 (my underlining).]

That the ordinary way to say 'after' in Wolof does not involve *gannaaw* is confirmed by the following observations. Consultants do not offer *gannaaw* constructions as translations of *after* constructions, nor are *gannaaw* constructions the typical way an 'after' meaning is expressed in spontaneous speech. Dictionaries (Fal, Santos, and Doneux 1990; Munro and Gaye 1997; Gamble 1991a; Faye 1996) and grammars (Diouf and Yaguello 1991, Gamble 1991b, Njie 1982, Sauvageot 1965) do not list *gannaaw* constructions as a way of saying *after* or *après*.[3] Also, in her study of the 'since' use of *gannaaw*, Robert (1997) notes that *gannaaw* is not the ordinary way of saying 'after'. Certain *gannaaw* constructions, as we have seen, are ambiguous between a 'past' and a 'later than' interpretation (example 1 above). For some speakers *gannaaw* constructions can even be ambiguous when the RP is stated

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explicitly (section 4.5). Examinations of texts show that appearances of *gannaaw* with a 'later than' meaning tend to be restricted to certain contexts rather than appearing wherever a 'later than' meaning is expressed. To summarize, up to this point we have seen that *gannaaw* is not an unmarked marker of the 'later than' relation like the English word *after*.

4.4. A motivation for the 'later than' meaning of *gannaaw*.

In this section I present a hypothesis for motivating 'later than' *gannaaw* as it appears in the common expression *gannaaw ëllëg* ("behind tomorrow") 'day after tomorrow', which is deictically anchored in the moment of speech. In later sections I will refine the account to make it appropriate for 'later than' *gannaaw* expressions more generally.

There is a way to motivate the use of FRONT or BACK words in temporal expressions without appealing to Moving Time (Hill 1978, Traugott 1975; see Chapter 5). This involves the Ego-Opposed strategy for coding/ conceptualizing spatial relations, based on Clark's (1973:45) notion of the *canonical encounter*. According to this strategy, a RP which is in front of Ego is treated as if it were facing Ego. A figure which is between the RP and Ego is spoken of as being 'in front of' the RP, and an entity on the other side of the RP is said to be 'in back of' it.[4] This is exemplified below for Wolof (see Robert 1997). As we saw in section 3.2, the felicity conditions for sentences like the Wolof and English versions of 9 below are essentially the same in both languages. (Cf. Diagram 4.1.)

9) a. *Big bi mungi ci [kanamu/gannaaw] bwat bi.*
pen the 3:PRSNTTV LOCPREP front:PD/back box the
'The pen is in front/back of the box.' (The possessed (PD) morpheme usually does not show up after *w*, so the *kanam* and *gannaaw* versions of this example instantiate the same construction.) [Q:62]

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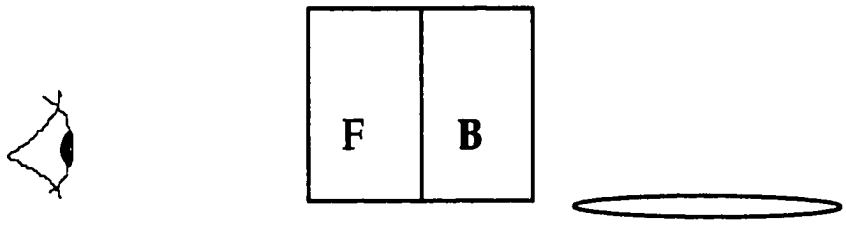


Diagram 4.1: Big bi mungi ci gannaaw bwat bi. *'The pen is in back of the box.'*

b. *Ci* *gannaaw* *bunt bi* *la* *làqu* *woon.*
LOCPREP back door the NONSUBJ.FOC.3 hide:MID PAST
'He was hidden behind the door.'
[Fal, Santos, and Doneux 1990, under *làqu*]

It should be noted at this point that the Ego-Opposed strategy is involved in Lakoff and Johnson's (1999) analysis of the Ego-centered Moving Time metaphor, which has Ego facing a region that maps onto the future and depicts successive times as objects moving toward Ego. In this scenario, later times are not only behind earlier times because of their direction of motion, but also because they are farther from Ego than earlier times, given that Ego is facing the future (cf. Diagram 4.2 below). In this case the Ego-Opposed strategy and Moving Time predict the same uses of FRONT/BACK terms. An example is *gannaaw ëllëg* "back tomorrow," 'day after tomorrow' (example 3 above). What I will present is an account in which the Ego-Opposed strategy is treated as separable from Moving Time, but schematically, the Ego-Opposed strategy and Ego-centered Moving Time are entirely consistent with one another, in the sense that they can be combined into a single consistent image (Lakoff and Johnson 1980).

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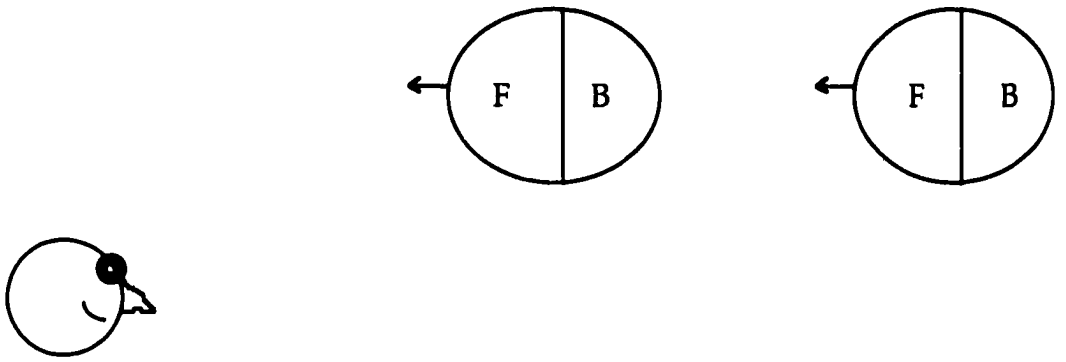


Diagram 4.2: *Ego-centered Moving Time and the Ego-Opposed temporal metaphor combined in one consistent image.*

In Chapter 3 it was argued that expressions in which a FRONT word means 'earlier' or a BACK word means 'later' tend to be structured by FRONT/BACK Moving Time. The argument was based on the observed deictic neutrality of such expressions. One possibility I did not consider in Chapter 3 was that the deictic contrast could be predicted simply on the basis of whether or not the RP in the grounding scenario is Ego's body or location, independently of whether or not the scenario is construed from a particular point of view. In this chapter we further investigate the possibility that point-of-view in and of itself is an element of experiential grounding that affects the meaning of metaphorical expressions even in cases where the RP is not Ego's body or location (cf. Lakoff 1987 [case study on *there*-constructions], Rubba 1996).

Since *kanam* 'front' and *gannaaw* 'back' both participate in spatial utterances that are structured by the Ego-Opposed strategy, we still have not got an explanation for why *gannaaw* can mean 'later than' but *kanam* cannot mean 'earlier than'. But if we look at certain communicative practices involving *gannaaw*, a clear contrast with *kanam* emerges.

Before I introduce an experiential motivation and metaphorical mapping in which temporal succession is construed in terms of the Ego-Opposed strategy, let me present some indirect evidence that demonstrates

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the plausibility of Wolof speakers habitually construing temporal relations in terms of this strategy. The first turn in the next example occurred spontaneously as a monolingual speaker of Wolof was explaining to me the meaning of *daaw-jéeg* 'year before last', in which *daaw* means 'last year' and *jéeg* occurs only in the expressions *daaw-jéeg* 'year before last' and *déwén-jéeg* 'year after next'. The example is not an example of one of the types of expression I am trying to explain, nor is it judged normal by native speakers, but it shows that one of the ways Wolof speakers can construe temporal relations is in terms of the Ego-Opposed strategy.

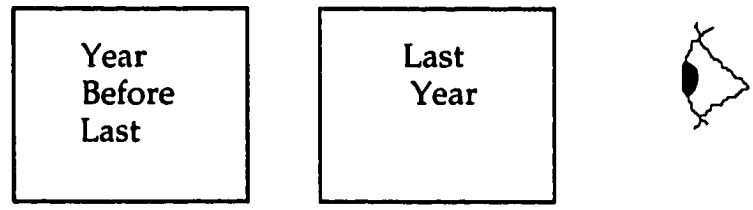
10) a. T: *Daaw-jéeg* *mooy* *gannaaw daaw.*
year.before.last 3.SUBJFOC:IMPF back last.year
'The year before last is behind last year.'
[att.] [s T]

b. KM: *Déwén-jéeg* *nag?*
year.after.next then
'And the year after next?'

c. T: *Mooy* *gannaaw* *déwén.*
3.SUBJFOC:IMPF back next.year
'It's behind next year.'

If T was using the same strategy in both turns, it was the Ego-Opposed strategy. I.e., he was linguistically construing the year before last as located on the other side of last year and the year after next as being located on the other side of next year, as in Diagram 4.3 below, where the eye represents Ego's viewpoint in the present, and the squares represent years.

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a. *Daaw-jéeg mooy gannaaw daaw.* 'The year before last is behind last year.'



b. [Déwén jéeg] *mooy gannaaw déwén.* 'The year after next is behind next year.'

Diagram 4.3: Temporal relations between years as construed by the Ego-Opposed strategy.

The temporal relations characterized by T and depicted in Diagram 4.3 can be summarized as follows, abbreviating *year before last* as YBL (etc), and using the symbol "<" to mean 'in front of' and ">" to mean 'in back of:

Table 4.1: Summary of Diagram 4.3.

YBL > LY ("year before last is in back of last year")

NY < YAN ("year after next is in back of next year")

The Ego-Opposed strategy, as seen in the diagram is the only likely motivation for the use of *gannaaw* in 10. As seen in Diagram 4.4 below, Moving Time and Moving Ego each motivate one of the two relations in Table 4.1 above, but not the other.

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FRONT/BACK orientation predicted by Moving Time:

[FRONT] YBL < LY < This Year < NY < YAN [BACK]

FRONT/BACK orientation predicted by Moving Ego:

[BACK] YBL > LY > This Year > NY > YAN [FRONT]

Diagram 4.4: The different FRONT/BACK orientations that would be predicted by Moving Time and Moving Ego.

Next is an example in which a different speaker appears to use the Ego-Opposed strategy in conjunction with Moving Time. In this example, the speaker is explaining the meaning of *dimaas bale* 'that Sunday', where *bale* ("DSTDEM," 'distal demonstrative') is a demonstrative that is prototypically used to denote something that is present in the situation of utterance at a distance from the interlocutors.

11) Dimaas bale *mën naa nekk*
Sunday DSTDEM be.able PERF.3:MBA be
dimaas bii paase — ba ci gannaawam,
Sunday PROXDEM go.beyond REL LOCPREP back:GEN
mën naa nekk ba ci gannaawam ankoor
be.able PERF.3:MBA be REL LOCPREP back:GEN again
"*That Sunday* could be 'this past Sunday — the one behind it' or it could be 'the one behind it again'."
'*That Sunday* could be "the Sunday before this past Sunday" or "the Sunday before that."'
[s XB, 122897]

Two things are noteworthy about the above example. First, the construal imposed on the referent of *dimaas bale* 'that Sunday' by means of

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the distal demonstrative *bale* is compatible with a construal in terms of the Ego-Opposed strategy. Both *bale* and the Ego-Opposed strategy construe the figural object as being located at a point relative to Ego in her deictic field. Second, in the phrase *ba ci gannaawam* 'the one behind it', *gannaaw* modifies *dimaas bii paase* 'this Sunday that has passed', which is construed in terms of the Moving Time metaphor as having passed Ego. However, this use of *gannaaw* is not consistent with Moving Time, because the Sunday behind 'this past Sunday' in the Moving Time sense would be the current Sunday.

Here is the metaphorical mapping proposed for 'later than' *gannaaw*:

Table 4.2: The Ego-Opposed temporal metaphor. Example: gannaaw ëllëg *"behind tomorrow" 'day after tomorrow'.* (RP = Reference Point; F = Figure)

SOURCE		TARGET
A physical RP on a (conceived) path leading to F from Ego's location.	→	A temporal reference point.
A place (F) beyond the RP on the path.	→	A later point or period of time.

The experiential grounding of the Ego-Opposed temporal metaphor.

The following is a typical scenario in Senegalese daily life. It exemplifies the experiential grounding for the Moving Ego metaphor (as instantiated by the *gannaaw* 'back' and *kanam* 'front' expressions in 1; Cf. Chapter 3), as well as the Ego-Opposed temporal metaphor.

Someone, let us call her Binta, is walking down the road in an outdoor market. She does not know where the gourds are, so she asks a man who is seated by the side of the road the question in 12a below. He replies with the utterance in 12b. In using the word *kanam* the man by the side of the road indexes the shared understanding that he and Binta have that she is walking

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through the market in a certain direction (cf. Clark 1996a, Hanks 1990). *Ci kanam* in this context means 'ahead', and the utterance in 12b can only mean that the gourds are ahead of the woman, farther down the road in the direction in which she has been going. This spatial scenario is precisely analogous to the temporal metaphor in 1b (*Mungi ñów ci kanam* 'She's coming later'; repeated below). In the spatial scenario, the place down the road is correlated in experience with the expected future time that Binta will arrive there. This motivates the use in 1b where *kanam* is used to talk about the future.

12) a. Q: *Fan lañuy fi jaaye leket?*
where NONSUBJ.FOC.3PL:IMPF here sell:VAL gourd
'Where do they sell gourds around here?'

b. A: *Ci kanam, sa càmmooñ.* (Cf. 1b)
LOCPREP front your left
'Ahead, on your left.'

Now let us imagine that the man by the side of the road had responded to Binta's question as in 12c below, also a typical phrase used in direction giving. This phrase is ambiguous, and the two interpretations correspond to the two temporal meanings of *gannaaw*. Interpretation (i) 'Over there behind you' is based on the same bodily schema as 12b involving Binta's motion through the marketplace: Her front is associated with where she is going and her back is associated with where she is coming from. This is precisely analogous to interpretation (i) of the metaphorical expression in 1a (*Ci gannaaw la ñów* 'She came a while ago.') In this case it is the experiential correlation between places Binta has passed on the road and the past moments when she was at those places that motivates the 'past' meaning of *gannaaw*. This mapping of BACK onto 'past' is also found in English, in expressions like *Back in 1967, San Francisco was a hippie Mecca.*

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12) c. A': *Fale ci gannaaw.* (Cf. 1a)
over.there LOCPREP back

(c) is ambiguous:

i) 'Over there behind you.' [090998]

ii) 'Over there' [behind something]. 'Just around the corner.'

Example 1 is repeated for convenience:

1) a. *Ci gannaaw la ñów.*
LOCPREP back NONSUBJ.FOC.3 come
"She came at back."
i) 'She came a while ago.' or
ii) 'She came afterwards.'

b. *Mungi ñów ci kanam.*
3:PRSNTTV come LOCPREP front
"She's coming at front." 'She'll come later.'

A plausible grounding of the Ego-Opposed temporal metaphor is a scenario in which interpretation (ii) of 12c is appropriate. (Cf. 1a, interpretation [ii]). In this scenario, the speaker of 12c shares Binta's perspective and indexes a reference object (RP) in their shared visual field (a building, perhaps), saying that the item Binta is looking for is behind this reference object.

In this scenario, the reference object is correlated in experience with the time Binta makes mental contact with it (Langacker 1987), or the time she expects to arrive at its location. She expects to arrive at the location of the figure at a *later* time. This is analogous to temporal expressions like 1a(ii), in which the figural time is said to be *later than* the (unstated) reference time.

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We have just seen two different strategies for locating things in space: One strategy, exemplified by 12b and 12c(i), uses the human body as reference object in a scenario in which the owner of the body (e.g. Binta) is going somewhere on a path. This is the familiar grounding scenario for Moving Ego, in which both the BACK and the FRONT regions are relevant.

The other strategy, exemplified by 12c(ii), is an Ego-Opposed strategy which uses as reference object something that is located in Ego's perceptual field and is endowed with a FRONT/BACK orientation based on Ego's viewpoint. As a matter of linguistic practice in Wolof society, the *gannaaw* 'behind' relation but not the *kanam* 'in front' relation is habitually used in the Ego-Opposed direction giving strategy. The hypothesis that this type of strategy exemplifies the relevant experiential grounding explains why *gannaaw* but not *kanam* is used in temporal expressions that employ the Ego-Opposed strategy. The claim is that linguistic practice in spatial scenarios motivates linguistic practice in temporal scenarios (cf. C. Johnson 1999a). This explanation will be elaborated in 4.7 where we will also discuss the contributions of other spatial uses of *gannaaw*.

While I claim that linguistic practices are important, I do not deny that the linguistic practice just discussed may be cognitively/functionally motivated. Physical uses of Ego-Opposed *gannaaw* are appropriate and useful in situations where the RP hides the figure (cf. Vandeloise 1991). Analogous uses of Ego-Opposed *kanam*, of course, would only be usable when the figure was between Ego and the RP. In these cases, the location of the figure might be more efficiently referred to by using Ego instead of some other object as the RP ("in front of us"), or by pointing out the figure with a gesture and demonstrative ("right over there"). Ego-Opposed *kanam* would thus seem to be less useful as a direction-giving strategy (in comparable contexts) than Ego-Opposed *gannaaw*.

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The account I am offering is somewhat unusual within metaphor theory because it is stated in terms of particular communicative practices (Hanks 1990, 1996a) (though cf. C. Johnson 1997, 1999a,b; Grady and Johnson 1997.) For example, in the case of *fale ci gannaaw* 'over there behind [something]' as in 12c(ii), the utterance depends for its meaning on the specific way the speaker appeals to the addressee's knowledge of the situational context of utterance. Particularly, the speaker assumes that she and the addressee will pick out the same contextually salient reference object at the moment of utterance and interpret it in the same way in terms of the addressee's desire to get to a particular location.

The above account predicts that 'later than' *gannaaw* expressions should reflect the viewpoint-dependent nature of the grounding experience, and I will argue that this is by and large correct. However, the experiential grounding as stated above predicts that 'later than' *gannaaw* expressions should tend to involve anchoring of the temporal relation in Ego's "now" but this is not what we find (see below).

We will now turn to a survey of the range of uses of 'later than' *gannaaw* and an overview of the contexts in which *gannaaw* appears. Then, through further investigation of the experiential grounding of the Ego-Opposed temporal metaphor, we will be able to see just how the Ego-Opposed temporal metaphor, the schematic spatial semantics of *gannaaw*, linguistic practices, and processes of deictic decentering contribute to a satisfactory characterization of 'later than' *gannaaw*. We will also briefly discuss Moving Time as a motivation in the 'later than' semantics of *gannaaw*.

4.5. Contexts in which there is a shared viewpoint and the range of 'later than' uses of *gannaaw*.

The metaphor that structures 'later than' *gannaaw* expressions inherently involves point of view: usually this means that the speaker and

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addressee have some shared understanding of the RP of *gannaaw*. This is exemplified most easily with the case of *gannaaw ëllëg* "behind tomorrow," where the RP is the day after the day that includes the moment of speech. The interlocutors have a shared understanding of this RP because the word *ëllëg* 'tomorrow' appeals to their common awareness of the moment of speech (cf. Clark 1996a). In this kind of situation I say that the RP of *gannaaw* occurs in a context of *shared viewpoint* because the utterance establishes or presupposes a particular perspective on the RP that is shared by the interlocutors. This shared perspective is independent of whatever perspective is imposed by *gannaaw*.

Other cases which were mentioned in section 4.1 (and will be repeated below) are analogous. In those cases the RP is in the shared awareness of the interlocutors because the RP is established in their awareness by preceding discourse rather than because it is present in the situation of utterance. The current section will exemplify the range of uses of 'later than' *gannaaw*, including those that do not conform to the tendencies under discussion here.

The tendency claimed here is consistent with the descriptions and usage examples found in dictionaries, with native speaker judgments, and with my own impressionistic observations of how *gannaaw* is used in spontaneous speech. Further evidence comes from text counts in which I counted tokens of 'later than' *gannaaw* in a corpus of almost 180,000 words of written text (including transcribed oral performance and other spoken texts, novelettes, and the example sentences from the Fal, Santos, and Doneux dictionary), and about four and a half hours of spoken interviews that I tape recorded in Saloum. The results of the text counts are summarized in section 4.6 below.

The first type of context of shared viewpoint that we will see is the type exemplified by the formulaic phrases *gannaaw ëllëg* and *gannaaw suba*, both of which mean 'day after tomorrow'.

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13) a. *Taw na tey de, waaye bu tawoon suba, mbaa*
rain PERF today EMPH but if/when rain:PAST tomorrow, or
gannaaw suba dana baax ci ñun lool.
back tomorrow FUT good LOCPREP us very
'It rained today, but if it rained tomorrow, or the day after tomorrow, it would be very good for us.'
[s C 101597]

The other deictic word that is acceptable to all consultants as the RP of *gannaaw* is *tey* 'today', as in the next two examples.

b. *... Ñu def ni: gannaaw-si-tey, ñu jëndoo, raxoo,*
we do like.this behind-LOCPREP-today we trade intermingle
sunu giir doon genn ....
our lineage be one
"... We do like this: back-at-today, we trade, intermingle, our lineage be one."
'Let's do like this: after today we will trade, intermingle ....'
(The *si* in *gannaaw-si-tey* is probably a variant of the locative preposition *ci*. It's presence flags the phrase as idiomatic, as does the transcriber/editor's decision to hyphenate the phrase.)
[Kesteloot and Mbodj 1983:155.]

c. *Gannaaw tey dina gën a bari jot.*
behind today FUT.3 be.more MBA be.plenty time
"Behind/beyond today he will have more time."
'After today he will have more time.'
[att.] [AK 12 nov 98]

We will see later that the physical relationship between a figure and a RP can be coded as *gannaaw* 'behind/beyond' even if Ego is inside the RP, so

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the use of *gannaaw tey* in 13b-c is consistent with the assumption that Ego is metaphorically located within "today."

The next example is marked with the percent (%) symbol to note that it is not fully acceptable to all speakers.

d. %*Gannaaw lii, mun nga tënk ci kayit bi.*
back this be.able 2.SUBJ summarize LOCPREP paper the
"Behind this you can summarize on the paper."
'After this [conversation] you can summarize [it] on (your) paper.'
[att.] [s G, Xi:101.]

In 13d above, the RP of *gannaaw* is encoded with *lii*, a proximal demonstrative. Cases in which the RP of *gannaaw* is deictically grounded amount to about twenty percent of the words whose referents play the role of RP of *gannaaw* in the text count.

Another type of context of shared viewpoint is one in which the RP of *gannaaw* is accessible (in the sense of Ariel 1990) from previous discourse as in the next examples. In 14a below, the discourse-referential demonstrative *loolu* 'that' explicitly indexes the addressee's presumed knowledge of the immediately preceding discourse. In 14b-d the RP of *gannaaw* is coded by zero, which is recognized as a marker of high accessibility crosslinguistically (Givón 1995). Both types of example are accepted without reservation by AK.

14) a. *Ginnaaw loolu, Biram dellusi ca dëkk*
back DISCREF Biram return:VEN LOCPREP.DIST village
ba, taxaw ca digg pénc ma....
the.DIST stand LOCPREP.DIST middle gathering.place the.DIST
'After that, Biram came back to his village, stood in the middle of the public gathering place ...' [Kesteloot and Mbodj 1983:113]

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The discourse-referential demonstrative *loolu* did not turn up very frequently in the text-counts, amounting to about six percent of the tokens. However, it is my impression that *gannaaw loolu* 'after that' is one of the more typical uses of 'later than' *gannaaw*. The phrase seems to occur often in spontaneous discourse and it turns up frequently in elicitation. AK has no trouble accepting *gannaaw loolu* expressions as well formed. The impression that the phrase *gannaaw loolu* is conventional to some degree is supported by the fact that Gamble's (1991a) dictionary includes *gannaaw loolu* as an entry glossed 'after that' but no other entry for *gannaaw* as a temporal term.

In examples 14b-d below the RP of *gannaaw* is coded by zero.

14) b. *Gannaaw ñu dem ci dë ton.*
back they go LOCPREP two ton
"Behind they went to two-tons"
'After(ward) they went to two-ton trucks.' (I.e., they started using two-ton trucks. Immediately before (b), the speaker had stated the weight that the first trucks that were used could carry.)
[att.] [s F 101597]

c. *Ci gannaaw laa ñëw.*
LOCPREP back NONSUBJ.FOC.1 come
"I came at back"
'I came afterward' [The translation in single quotes is from the original (my underlining). *Ñëw* is a variant of *ñów*.]
[Munro and Gaye 1997:31 under *ci gannaaw*]

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d. *Dogu woon nañu ba di*
decide PAST PERF.3PL to.the.point.of AUX
ndëpp, gannaaw gi ñu génn ci.
organize.exorcism.dance back the they exit LOCPREP
"They decided to the point of organizing an exorcism dance; the back they got out of it."
'They had decided to organize an exorcism dance, but after(ward) they changed their plans.'
[Fal, Santos, and Doneux 1990. Under *ndëpp*]

Examples 14b-d above represent three variants of a grammatical construction that codes the RP of *gannaaw* as zero. In (c), *gannaaw* appears with the locative preposition but no article, in (d) it appears with the article but no preposition, and in (b) it appears without either. If the RP is made explicit, the resulting string is unacceptable for AK, as in 14e below.

14) e. *?(Ci) gannaaw ndaje mi laa ñów.*
(LOCPREP) back meeting the NONSUBJ.FOC.1 come
Intended: I came after the meeting. (Cf. [c] above.)
[AK, 1 oct 98]

Example 14c above is an example sentence from Munro and Gaye 1997 (a Wolof-English dictionary), under an entry of *ci gannaaw* glossed as 'in back; afterward, later'. Judging from the example and the gloss, the authors recognize the use that I have noted here in which *ci gannaaw*'s RP is coded as zero and the meaning is 'afterward, later'. There is no entry in which *gannaaw* is glossed 'after', except that *gannaaw suba* is listed as 'the day after tomorrow.'[5] In their English-Wolof index, Munro and Gaye do not list *after* alone, but they list *after that*, glossed as '*bi/su loolu weesoo*'; i.e., 'when that has passed' (cf. Chapter 6). Thus, in Munro and Gaye 1997, *gannaaw suba* 'day

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after tomorrow' and the *gannaaw*-plus-zero construction (i.e. expressions in which the RP of *gannaaw* is coded as zero) are treated as a temporal terms, but the lexeme *gannaaw* is not treated as a temporal term, and *gannaaw* is not treated as a translation of *after*. Thus Munro and Gaye's presentation supports the claim that 'later than' *gannaaw* tends to occur with a deictic word (or at least with a word meaning 'tomorrow'), or in a context in which the RP of *gannaaw* is accessible in the discourse.

Instances in which the RP of *gannaaw* is coded by zero amount to the most frequently occurring type in the text counts, at about twenty-nine percent of occurrences of 'later than' *gannaaw*.

A rather different type of viewpoint-establishing context occurs in cases where the RP of *gannaaw* is the first clause of the anterior construction as in the next example. Note that *gannaaw* is optional in this case.

15) (*Gannaaw*) *bi* *Kondoroŋ* *bi* *demee*
(back) when Kondoroŋ the go:ANT
la *alal* *ju* *bare* *feeñu.*
NONSUBJ.FOC.3 wealth REL be.abundant appear
"(Behind) when Kondorong had left, the abundant wealth appeared."
'After/when Kondorong had left, the man got rich.'
[AK, 091798]

Recall that the anterior construction was exemplified (in section 4.3) near the beginning of the chapter as an unmarked way to say 'after' in Wolof. Since the construction is a way of saying 'after', it requires the conceptualizer to view the referred-to events in a particular sequence. The function of *gannaaw* when it combines with the anterior construction is to emphasize this already-established viewpoint rather than to independently assert a relation of sequence. Tokens of the *gannaaw*-plus-anterior construction

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account for about twenty percent of the tokens of *gannaaw* in the text count. This construction is discussed further below.

Finally, we come to uses of *gannaaw* that are not automatically predicted by the generalizations offered in this chapter. The reason these examples are not predicted is that in them the RP of *gannaaw* does not exhibit any of the special deictic or discourse properties discussed above. In these examples the RP of *gannaaw* is coded by an ordinary (nondeictic) noun. However, it is worth noting that these nouns tend to denote culturally established points or periods of time like mealtimes, prayertimes, or months. The conceptualizer can presumably metaphorically locate herself relative to these times, and thus have a point of view relative to them.

16) a. *Gannaaw timis, gee. Gannaaw*
back dusk post.dusk.prayertime back
gee rekk guddi.
post.dusk.prayertime only night
'After dusk, [is] the post-dusk prayertime. After the post-dusk prayertime then, [is] night.'
[N 101197]

b. %*Gannaaw añ lañu baaxoo di naan njar.*
back lunch NONSUBJ.FOC.1PL have.tradition AUX drink njar
'We usually drink *njar* after lunch.' (*Njar* means 'milk cut with water' in this context.)
[Fal, Santos, and Doneux 1990 under *njar*]

The following example was judged ambiguous by one speaker, for whom *gannaaw* in this context can mean either 'before' or 'after' (The speaker was G; see Chapter 5.) The reason AK accepted 16a and 16c but not 16b

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is probably that the RP in (a) and (c) is coded by a word that saliently denotes a time rather than an event (prayertimes in [a], a month in [c]).

16) c. *Gannaaw weerukoor laa fi ñówoon.*
back Ramadan NONSUBJ.FOC.1 here come:PAST
'It was after Ramadan that I came.'
[att.] [sf Y]

In the following examples, as in the preceding ones, *gannaaw* appears in a context that does not involve a shared viewpoint according to the special definition that I have adopted here, but the examples have an interesting twist: although they do not show any of the formal markings I have been discussing, they seem to crucially construe experience from a particular viewpoint.

16) d. *Rëccoonga ca gannaaw ndogal*
regret:PRSNTTV LOCPREP.DIST back event
"Regret is behind the event."
'Regret comes after the event.' (This is from a song that warns people to avoid risky behavior that leads to AIDS.)
["Sidaa," by Kine Lam] [11 feb 99 (25 Jan 94, Xob)]

My claim about example 16d is the following. It is addressed in the given context to people who have not contracted AIDS and so are not experiencing the regret that 16d refers to. Thus 16d has its intended meaning only from the point of view of before the event which serves as the RP of *gannaaw*.

The next example is formally like the first clause of 16a above; like 16d it seems to depend for its effect on being understood from a particular point of view, in this case the point of view of someone who is having trouble.

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16) e. *Gannaaw ay, jàmm*
back conflict peace
"After conflict — peace."
'Peace comes after conflict.' (The proverb reminds people in hard times that the future will be better.)
[Cissé, Guèye, and Touré 1982]

The unacceptable example in 16f below is syntactically parallel to (each clause of) 16a and to 16e. Example (f) however lacks the kind of motivation found in (e): In (e), the RP of *gannaaw — ay* — 'conflict', is an undesirable state. The proverb would be appropriately uttered in a context in which someone is presumed to be (metaphorically) "in" such a state. The proverb is meaningful from the point of view of the person in the state of conflict, telling her that what metaphorically lies beyond the state of conflict is a state of peace. In the case of (f), there is no comparable motivation to view the sequential relationship between washing and ironing in this way because there would ordinarily be no particular significance to emerging from the activity of washing and entering the activity of ironing.

16) f. *?Gannaaw fóot, paase.*
behind washing ironing
Intended: Ironing is after washing.
[AK, 11.12.98]

Point of view can therefore be relevant to *gannaaw* expressions even when none of the formal markings I have been discussing are present. Although arguments can be made for individual examples, such examples as 16-f are unpredicted by the criteria according to which the text-count was evaluated. Unpredicted tokens of 'later than' *gannaaw* like those above amount to about twenty-four percent of the tokens in the text count.[6]

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Among the contexts of shared viewpoint that the RP of *gannaaw* tends to occur in, the anterior construction deserves further discussion.

4.5.1. The anterior construction and 'later than' gannaaw.

The *gannaaw*-plus-anterior construction is completely productive, and it provides an interesting example of an interaction between metaphor and grammar. While it is a separate phenomenon from deictic anchoring and the type of discourse anchoring we have examined, some of the same principles that motivate such anchoring also motivate *gannaaw*'s combination with the anterior construction.

Let us first discuss the productivity of the *gannaaw*-plus-anterior construction. Certain *gannaaw* expressions are not always acceptable to consultants, for example AK has rejected 16b above. When consultants reject such expressions in which *gannaaw* is a preposition, they often offer a paraphrase with the anterior construction. For example *gannaaw añ* 'after lunch' in 17a below (as in 16b above) can be paraphrased as in 17b below.

17) a. %*gannaaw añ*
back lunch
'After lunch'
[AK]

b. *gannaaw ba ñu añ-ee*
behind when we eat.lunch-ANT
'After we ate lunch'
[AK]

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In 18 below, a consultant from Saloum rejected (a) as unclear and offered (b) as a possible paraphrase.

18) a. *?Déwén-jéeg mungi ci gannaaw déwén*
year.after.next. 3:PRSNTTV LOCPREP back next.year
"Year after next is behind next year."
Intended: Year after next is after next year
[s XB, 122897]

b. *Gannaaw bu déwén paasee,*
behind when next.year go.beyond:ANT,
déwén-jéeg <bi> doog a ñów
year.after.next <the> begin MBA come
"Behind when next year passes, the year after next finally comes."
'After next year passes is when the year after next comes.'
[s XB, 122897]

The semantics of 'later than' *gannaaw* and those of the anterior construction are highly compatible with each other. In the anterior construction, the subordinate clause (which is bracketed in 19a below) encodes the earlier event, which functions as ground (i.e., RP) relative to the later event. For example in 19a, *bi Kondoroŋ bi demee* 'when the Kondorong had gone' functions as RP (indicated by RP above the data line), and *alal ju bare feeñu* 'abundant wealth appeared' functions as figure (indicated by F above the data line).

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RP

19) a. [*Bi* *Kondoroŋ* *bi* *dem-ee*]

when Kondorong the go-ANT

F

la [*alal* *ju* *bare* *feeñu*]

NONSUBJ.FOC.3 wealth REL be.abundant appear

"It was when Kondorong had left that the abundant wealth appeared."

'When Kondorong had left, the man got rich.'

[AK, 091798]

When *gannaaw* is added to the anterior construction, as in 19b below, what *gannaaw* takes as its RP is the referent of a clause that is already designated by the anterior construction as a RP relative to which the time of the later event is determined. This is the crucial contribution of the anterior construction that is relevant to the argument advanced in this chapter.

RP

19) b. <u>*Gannaaw*</u> [*bi* *Kondoroŋ* *bi* *dem-ee*]

behind when Kondorong the go-ANT

F

la [*alal* *ju* *bare* *feeñu*]

NONSUBJ.FOC.3 wealth REL be.abundant appear

"It was <u>behind</u> when Kondorong had left that the abundant wealth appeared."

'When Kondorong had left, the man got rich.'

[AK, 091798]

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The figure-ground organization (Talmy 1978) of the anterior construction is directly analogous to that involved in the metaphorical mapping proposed in section 4.4 above, Table 4.1. In the mapping, an entity that is associated with an earlier event is treated as RP (i.e., ground), and an entity that is associated with a later event is treated as figure. For example, in 20 below, *loolu* 'that' functions as RP and the clause *Biram dellusi ca dëkk ba* 'Biram came back to his village' functions as figure.

RP F

20) *Ginnaaw* [*loolu*], [*Biram dellusi ca dëkk ba*]...
back DISCREF Biram return:VEN LOCPREP.DIST village the.DIST
'After that, Biram came back to his village...

We have just seen that the structure of the Ego-Opposed metaphor as instantiated with *gannaaw* is compatible with the grammatical-semantic structure of the anterior construction. This accounts for the fact that *gannaaw* combines with the anterior construction productively. The fact that the anterior construction is an ordinary way of encoding the 'later than' relation in Wolof accounts for the fact that that the *gannaaw*-plus-anterior construction is productively used to express the 'later than' relation.

The theoretical background for this observation about *gannaaw* and the anterior construction comes from Talmy (1978), where he shows how the relationship between a subordinate and main clause can be analyzed as a figure-ground relationship in which the subordinate clause is the ground (RP) and the main clause is the figure. Talmy comments on the naturalness of construing the earlier member of a sequence as groundlike and the later member figurelike. The following hypothesized universal tendency summarizes Talmy's idea.

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> The unmarked (or only possible) linguistic expression for any particular relation between two events that are in temporal sequence treats the earlier event as a reference-point, or Ground, and the later event as requiring referencing, i.e. as the Figure. Where the complete surface form is that of a whole complex sentence, the two events are accordingly expressed in the subordinate clause and in the main clause, respectively. (1978:638).

The uses of *gannaaw* in which the RP is accessible in the discourse and the *gannaaw*-plus-Anterior uses have the following important property in common. In both cases *gannaaw* cooccurs with a discourse-framing phenomenon that characterizes the earlier event as groundlike. In the *gannaaw*-plus-anterior uses this discourse framing is provided by the anterior construction. In the uses with the accessible RP, the discourse framing inheres in the information-structure relationship between the RP and figure: Independently of the figure/ground relationship imposed by *gannaaw*, the already active element naturally functions as RP relative to which mental contact is made with the newly introduced element.

In this subsection (4.5.1.) we have examined the anterior construction as a grammatical strategy that codes posteriority ("afterness"). This construction is structurally analogous to the metaphor which maps the Ego-Opposed locational strategy onto temporal experience with *gannaaw*. This appears to be an instance in which the cognitive abilities that underlie the grammatical encoding of temporal phenomena are similar to those that underlie the metaphorical construal of the same phenomena. Furthermore, the fact that 'later than' *gannaaw* combines into a single construction with the anterior construction suggests that metaphor can contribute to grammatical meaning. (Cf. e.g., Emanatian 1992, Goldberg 1995, Heine, Claudi, and Hünnemeyer 1991a,b; Lakoff and Johnson 1980, 1999; Sweetser 1988, 1990).

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Summary

In this section (4.5) we have seen three kinds of contexts in which the interlocutors share a viewpoint on the RP of 'later than' *gannaaw*. These contexts are briefly characterized here:

i) The RP of *gannaaw* is available in the physical situation of utterance.

ii) The RP of *gannaaw* is accessible in the discourse.

iii) The RP of *gannaaw* is the protasis (typically the first clause) of the anterior construction. The context created by the anterior construction stands out as different from the other two kinds of context in that it is created by the utterance of the sentence that contains *gannaaw*. By definition, the RP of *gannaaw*, like any RP, is a ground in a figure-ground relationship. The crucial contribution of the anterior construction, when *gannaaw* combines with it, is to establish the RP of *gannaaw* as a ground element (RP) in the shared understanding of the interlocutors independently of the contribution of *gannaaw*.

4.6. Text-count data.

Table 4.3 below summarizes the data from the text count (involving almost 180,000 words of written text and about four-and-one-half hours of spoken Wolof). These data support the claim that the RP of 'later than' *gannaaw* tends to occur in contexts in which an aspect of the discourse or situation of utterance provides the interlocutors with a shared viewpoint or perspective on the RP of *gannaaw*. In the texts, I found a total of forty-nine tokens of *gannaaw* meaning 'later than': Thirty-seven of the RP's in question (76%) occurred in contexts of shared viewpoint. These are the ones that are listed above the dashes in the table.

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Table 4.3: Environments in which 'later than' gannaaw *occurs in texts.*

env	T	N	F	C	JF	Ta	Ep	Dt	Ab	Fal	Tot	%
tmp	0	0	0	1	1	2	1	0	4	1	10	20.4
loo	0	0	0	0	0	2	0	0	0	1	3	6.1
zer	0	0	2	0	6	2	0	0	1	3	14	28.6
ant	1	0	0	0	0	3	5	1	0	0	10	20.4
---	---	---	---	---	---	---	---	---	---	---	---	---
prs	0	0	0	0	0	0	2	0	0	0	2	4.0
oth	1	6	0	0	0	1	1	0	0	1	10	20.4
Tot	2	6	2	1	7	10	9	1	5	6	49	99.9

Note: *env* stands for 'environment'; environments are listed in the leftmost column. Sources of the data are given in the top row. The abbreviations are glossed below, after the Key to the Sources.

Key to sources of data:

Note: One fifty-minute tape of a man in Saloum (XW) did not contain any tokens of 'later than' *gannaaw*; this data is not included in the table.

T is a man from Saloum. The sample is a ninety-minute taped interview.

N is a woman from Saloum. The sample is a fifty-minute taped interview.

F and *C*, men from Saloum, were interviewed together. The sample is a 90 minute taped interview. The Saloum residents were born and raised in Tuubaa Morit, and were interviewed there.

JF is a collection of short stories by Séex Aliyu Ndaw (Ndaw 1997). It contains about 18,000 words.

Ta is a collection of transcribed oral performances of folktales (Kesteloot and Dieng 1989; Kesteloot and Mbodj 1983) totaling about 44,100 words of Wolof.)

Ep is *l'Épopée du Kajoor* (Dieng 1993). This is mostly oral (poetic) performances by two traditional historians (griots): Demba Lamine Diouf and

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Bassirou Mbay, but there is also (transcribed spoken) prose from these historians. This source has about 55,400 words of Wolof.

Dt is *Démb ak tey* (CENTRE D'ETUDE DES CIVILISATIONS, DAKAR) a collection of transcribed interviews with Wolof elders. About 16,700 words.

Ab is a novelette by Maam Yunus Jeŋ (Jeŋ 1992) with 23, 868 words.

Fal is *Dictionnaire wolof-française* (Fal, Santos, and Doneux 1990). The example sentences from this dictionary were considered as data.

Tot. is 'total'.

Following are examples of *gannaaw* in the environments listed in the first column of Table 4.3. The environments are classified according to the nature of the RP involved. For example in the *tmp* category, the RP is a temporal deictic word, as in the first example below.

tmp = 'temporal deictic'; e.g., *suba* 'tomorrow'.

Taw na tey de, waaye bu tawoon
rain PERF today EMPH but if/when rain:PAST
suba, mbaa gannaaw suba dana baax
tomorrow or back tomorrow FUT.3 good
ci ñun lool.
LOCPREP us very
'It rained today, but if it rained tomorrow, or the day after tomorrow, it would be very good for us.' [att.] [s C 101597]

loo = *loolu* 'that': *Gannaaw loolu, looy wax?*
back DISCREF what.you:IMPF say
'After that, what do you say?' [Fal, Santos, and Doneux 1990 under *gannaaw*.]

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zer = 'zero': *Gannaaw ñu dem ci dë ton*
back they go LOCPREP two ton
'Afterwards they went to two-ton trucks.' (I.e., they started using two-ton trucks.) [att.] [s F 101597]

ant = anterior: *Mu ne ko "noo tudd?"*
3.SUBJ tell 3.OBJ how.you be.named
Ginnaaw ba mu ko nuyoo, waa ja ne ko
back when 3.SUBJ 3.OBJ greet:ANT person the.DIST tell 3.OBJ
"Fara Tëgg lañu may
Fara Blacksmith NONSUBJ.FOC.3PL 1.OBJ:IMPF
wooye."
call:VAL
'He said, "What's your name?" After he greeted him, the guy said "Fara The Blacksmith" they call me".' [Kesteloot and Mbodj 1983:107. Punctuation altered.]

prs = person: *Ginnaaw sa baay nag ngay doora*
back your father then you:IMPF begin:MBA
falu.
elect:MID
'You will be enthroned after your father.' (I.e., you will be king when your father is finished being king.) (French translation from the data source: 'Tu règneras après ton père.') [Ep:340, line 295.]

oth = other noun: *Gannaaw timis, gee*
back dusk post.dusk.prayertime
'After dusk, [is] the post-dusk prayertime.'

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A comparison of the Wolof data with some data on the English word *after* is instructive. I examined 225 randomly selected temporal uses of *after* from the COBUILD corpus of spoken British English. I chose to look at spoken English because RPs of *after* are more likely to appear in contexts of shared viewpoint in spoken than written English. 78% of the RPs of *after* were not in contexts of shared viewpoint (NSV), while only 22% were in contexts of shared viewpoint (SV). With the exception of the anterior construction, the contexts of shared viewpoint in which RPs of *gannaaw* occur have rough counterparts with RPs of *after* in English. For example, in *After <u>that</u> we went to the beach,* the RP of *after* is coded by *that* as accessible in the discourse and thus as in a context of shared viewpoint. The English/Wolof comparison is summarized below.

Wolof:

SV	76%
NSV	24%

English:

SV	22%
NSV	78%

The comparison of *gannaaw* with *after* shows that expressions which mean 'later than' do not necessarily tend to have RPs that appear in contexts of shared viewpoint. I hypothesize that the tendency for RPs of *gannaaw* to be in contexts of shared viewpoint has to do with the experiential grounding of the Ego-Opposed temporal metaphor.

4.7. More on the experiential grounding of 'later than' *gannaaw.*

Now that we have seen the full range of uses of 'later than' *gannaaw,* we need to return to the question of experiential grounding. Recall the

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grounding that I proposed in section 4, which was exemplified with a marketplace scenario. This scenario involves a deictic use of *gannaaw* in which a speaker indexes a RP that is perceptually available in order to refer to a figure that is on the far side of the it. The example sentence (12c[ii]) was *fale ci gannaaw* 'over there behind'. This grounding is appropriate for deictic uses of 'later than' *gannaaw* such as *gannaaw suba* 'day after tomorrow', but we still need an account of how the proposed grounding is relevant to uses that are not deictically anchored, such as most of the ones we saw in the previous section.

I will offer an account that uses the notion of *decentering* (cf. chapters 2 and 3). The ideas involved are similar to those of Emanatian (1992) in her discussion of a Chagga word for COME that is used to express a future meaning (see Chapter 5), and also to those of Robert (1997) in her discussion of *abstract viewpoint* and its relevance to the 'since' use of *gannaaw*. (Cf. also Rubba 1996.)

A decentering account of 'later than' *gannaaw* is plausible because there are uses of *gannaaw* involving motion and location that exhibit decentering that is analogous to the decentering that we would postulate for temporal uses. An example is given in 21 below, which was uttered spontaneously in the US, as AK was explaining to me where a certain lake is in Senegal. This type of use in which a geographical location is described will be referred to as the *Landmark on Route* use of *gannaaw*.

21) *Ci* *gannaaw* *Pikin bala ngay jot Tëngéej.*
LOCPREP back Pikin before you:IMPF reach Rufisque
"Behind Pikin before you reach Rufisque."
'Beyond/after Pikin, before you get to Rufisque.'
[att.] [AK 082299]

Example 21 is understood relative to a decentered indexical ground in which Pikin is fictively in the conceptualizer's proximal field of interaction.

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How this works will be discussed below. For now, let us note that this indexical ground is partially structured by the knowledge that in traveling from the USA to Rufisque, one would typically go via Dakar (where there is an airport). Only in such a scenario is Rufisque *beyond* Pikin. This scenario is depicted topologically (i.e. abstracting away from considerations such as those of metrical distance and compass orientation) in Diagram 4.5 below. In this case, knowledge of routine behavior involving the conceptual frame (Fillmore 1982a, Lakoff 1987, Lakoff and Johnson 1980) of traveling from Oakland to Rufisque contributes structure to the decentered indexical ground (or mental space) (Hanks 1990, Rubba 1996).

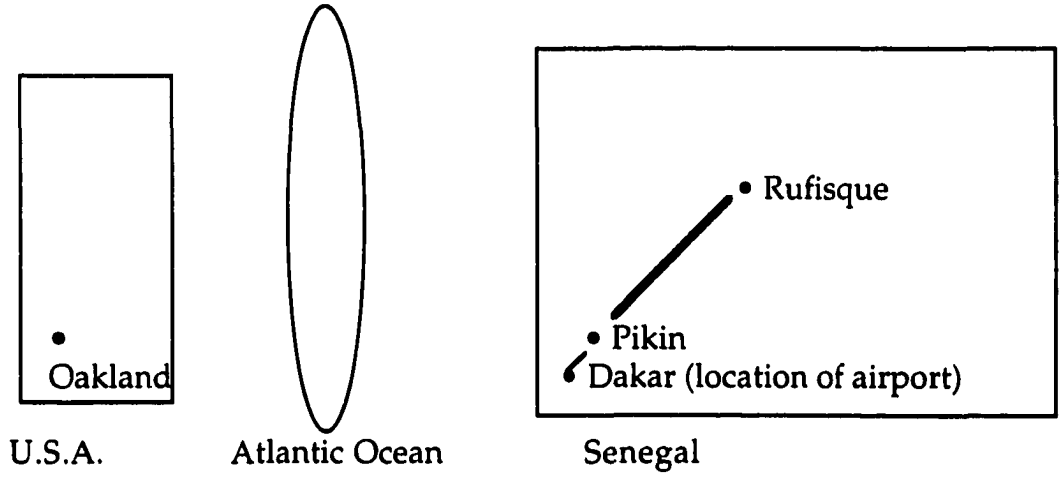


Diagram 4.5: "Behind Pikin, before you reach Rufisque."

I will propose that the experiential grounding for 'later than' *gannaaw* includes a scenario like that exemplified in 21, in which the conceptualizer makes mental contact with the RP in a decentered indexical ground rather than in the immediate field of perception. This proposal accounts for the tendency of 'later than' *gannaaw* expressions to occur in contexts that involve an element of shared viewpoint while not being directly anchored in a "here and now." Before we see the specific proposal, let us look at some ordinary uses of *gannaaw* that are schematically derived from the canonical encounter scenario in which the physical Ego-Opposed strategy emerges (Clark 1973), but

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employ a conventional fictive viewpoint. This firmly establishes a precedent for postulating a fictive viewpoint in the case of 'later than' *gannaaw*.

One use that employs a conventional fictive viewpoint is that in which inanimate objects are assigned inherent fronts and backs because of the way people canonically interact with them (Allan 1995, Clark 1973, Fillmore 1997/1971, Levinson 1994, Miller and Johnson-Laird 1976, Robert 1997, Vandeloise 1991). A house is a good example of such an object because people routinely interact with houses in certain ways: The side[7] of a house that is most frequently seen by the public, and through which the house is typically entered, is the FRONT. The opposite side is the BACK, as in the Wolof example below and its English translation.

22) a. *Maangiy jaaraale taabal ji ca buntu*
1:PRSNTTV:IMPF make.go.via table the LOCPREP.DIST door:PD
gannaaw ba, moo gën a yaatu.
back the.DIST 3.SUBJ.FOC be.more MBA be.spacious
'I'm going to take the table through the back door; it's bigger.' [The *back door* is the door in the back part of the house.]
[Fal, Santos, and Doneux 1990, under *jaaraale*]

The next example shows an assignment of conventional viewpoint that does not depend on any asymmetry in the reference object, nor on the side from which it is conventionally viewed. The reference object in this case is a mound of earth (*sëntaare*), *behind* which one protects one's self on the battlefield. As in the case of 22a above, Wolof and English seem to share the relevant strategy for assigning a BACK.

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22) b. *Soldaar yaanga* *waafoon* *ca* *gannaaw*
soldier the.PL:PRSNTTV.DIST crouch:PAST LOCPREP.DIST back
sëntaare ba.
mound the:DIST
'The soldiers were crouched behind the mound.'
[Fal, Santos, and Doneux 1990, under *sëntaare (b)*]

In 22b above, the FRONT/BACK orientation of the mound is determined by its protective function, which is determined by the direction of attack in a fairly complex culturally constituted conceptual frame (cf. Vandeloise 1991).

To summarize, we have just seen a Location on Route use of *gannaaw* (21) that exemplifies the kind of decentering that I propose for the temporal uses. In addition, we have seen two other uses which demonstrate that it is ordinary for the BACK part or region associated with an object to be determined relative to a conventional (culturally determined) fictive viewpoint (cf. Rubba 1994, 1996; Sweetser 1997; Talmy 1988, 1996).

Physical Ego-Opposed uses of gannaaw *that are related to the 'later than' uses.*

The proposals made in this subsection follow much previous work in which it has been shown that there are principled relations between different uses or senses of particular lexical items, and cogently argued that certain uses of a given item depend on the existence of other uses of that item. (Cf. Baker 1999, Brugman 1983, 1988; Fillmore and Atkins 1992, Hopper and Traugott 1993, C. Johnson 1999a,b; Lakoff 1987, Robert 1997, Rubba 1994, Sweetser 1990, Traugott 1986, 1988, 1989; Van Oosten 1986).

Starting from the body-part meaning 'back', *gannaaw* can be extended to refer to asymmetrical objects that have one side with which people canonically interact more than the opposite one (Allan 1995, Robert 1997,

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Vandeloise 1991). As we saw in the case of the house in example 22a above, the *gannaaw* (BACK) is the side with which people interact less. From there *gannaaw* extends to denote the space *associated* with the back of something. Rubba (1994) has described this kind of development for certain prepositions in the Modern Aramaic dialect of Telesqof.

Parallel to the development from body-part term to object-part term, an object with no intrinsic back can be construed as having a back according to the Ego-Opposed strategy (Clark 1973, Fillmore 1997/1971, Talmy 1983; see sections 4.4, 3.2 above). The notion of associated space (Robert 1997, Rubba 1994) can be applied to the concept of 'back' as determined by the Ego-Opposed strategy to refer to the space associated with the far side of something that has no inherent back. An example of this is repeated below.

23) *Big bi mungi ci gannaaw bwat bi.*
pen the 3:PRSNTTV LOCPREP back box the
'The pen is in back of the box.'
[Q:62]

At this stage of development in its spatial semantics, *gannaaw* can instantiate the Ego-Opposed temporal metaphor in deictically anchored expressions like *gannaaw ëllëg* "behind tomorrow" 'day after tomorrow', as described in section 4.4. It is also possible that *gannaaw* instantiates the Ego-Opposed temporal metaphor at this stage of development in deictically unanchored uses via decentering. However, the specific proposal that I will advance involves a series of developments in physical uses like the one in example 21 ("Behind Pikin before you get to Rufisque"). These uses provide motivation for the fact that 'later than' *gannaaw* tends to be used in contexts where its RP is not anchored in the "here and now."

The sense of *gannaaw* that appears in the Landmark on Route use seen in 21 can be glossed 'beyond/outside'. This sense is exemplified again in 24

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below. The question we are concerned with here is how BACK comes to mean 'beyond'.

24) *...xale ba dem ba ca ginnaaw dëkk ba....*
child the.DIST go to.the.point.of LOCPREP.DIST back town the.DIST

i) '... the child went outside of the town'; '...the child went beyond the edge of town.'

ii) '... the child went beyond the town.'

[Kesteloot and Mbodj 1983:109] [9998]

Gannaaw in 24 above, like the gloss *beyond*, presupposes an origin, a directionality, and a boundary (cf. Talmy 1975). This is diagrammed below. In the diagram, the vertical line represents a boundary (RP) and the crosshatched lines represent an area (figure) on the far side of the boundary from the origin. This region is profiled (i.e. *designated*, see Langacker 1987) by *gannaaw*. The 'beyond/outside' schema is an extension of the canonical encounter: The origin corresponds to Ego's viewpoint, the boundary corresponds to the object which is assigned a FRONT and a BACK, and the region profiled as *beyond* the boundary corresponds to the space associated with the BACK of the reference object (cf. Robert 1997). A diagram that emphasized the 'outside' notion would be like the one below except the boundary would be a circle surrounding the origin, and arrows would radiate out from the center.

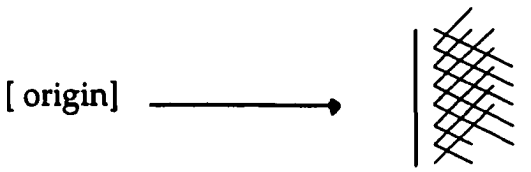


Diagram 4.6: The "beyond/outside" sense of gannaaw.

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The discussion below details what is necessary to get from the meaning 'in back of/behind' to a meaning like 'beyond' as it appears in the Landmark on Route uses. The description is framed in terms of one possibility, which is that Wolof speakers understand the 'beyond' relation in terms of the 'in back of' relation whenever they use *gannaaw* in the Landmark on Route scenario. However, I have no independent evidence on how Wolof speakers conceptualize the notion 'beyond'.

A first step in assigning FRONT/BACK orientation to a diffuse entity like a town is to impose on it a conceptual framework (Fillmore 1983:315) whereby it is construed as a three-dimensional solid object with vertical sides. This is done by means of a process something like *schematization* as discussed by Talmy (1983:258ff),[8] and also by Rubba (1994:89ff.) with respect to the semantic extension from body-part to object-part. An example of schematization from Talmy (1983) involves construing an irregularly-shaped lake as having parallel sides so that it can function as reference object for the word *across* in a sentence like *I swam across the lake*. What constitutes *schematization* in the case of the lake is the act of construing the sides of the lake as parallel lines.

In what follows, we will take it for granted that the reference object of *gannaaw* is schematized as a three-dimensional object with sides, like the hill in example 25. Let us imagine a scenario in which the hill that serves as RP in 25 is distant from the interlocutors and out of view.[9]

25) *Moodu mingi dëkk ci ginnaaw tund bi.*
Moodu 3:PRSNTTVE reside LOCPREP back hill the
'Moodu lives behind the hill.' [Imagine a hill that is out of view — KEM.]
[Robert 1997:119]

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Recall that the Ego-Opposed strategy is based on the canonical encounter (Clark 1973). The canonical encounter is a scenario of face-to-face interaction that is crucially grounded in the "here and now" of Ego's perceptual field (cf. Hanks 1990, M. Johnson 1987). However, in the Landmark on Route scenario and in example 25, Ego cannot perceive the RP of *gannaaw*. In this scenario, it is only by means of decentering that the RP can be schematized as having a FRONT and a BACK in terms of the canonical encounter.

In order to see how decentering is involved in an example like 25, let us briefly discuss three kinds of decentering described by Hanks (1990:217ff. Hanks' term is *transposition*; cf. Haviland 1996). According to Hanks, the first kind is what "...Bühler [1990/1934] described as 'Muhammad goes to the mountain'" (p. 217). In this type, the conceptualizer projects her spaciotemporal coordinates into a narrated frame, as in example 5 of section 2.3, *The door of Henry's lunchroom opened and two men came in.* This kind of decentering is what Fillmore (1982b) discusses in terms of *shifted deictic center*. The second kind is called "the mountain comes to Muhammad" (p. 218). In this type "...the speaker describes objectively distant objects as if they were close at hand," embedded in the actual situation of utterance. An example would be a scenario in which, not having a baby in my arms, I said *I was holding the baby like this*, with gestures indicating how I had been carrying the baby and inviting my interlocutor to imagine a baby in my arms (cf. Clark and Gerrig 1990, Taub 1997).

In the third type, which is what interests us here, "neither the speaker nor the referent is drawn to the place of the other" (p. 218). Rather the speaker alters her current indexical frame so as to treat a distant landscape as if it were within the perceptual (and interactional) sphere of the interlocutors. For example, a Wolof speaker inside his home indicates the location of a school and a store which are away from the place of the speech act and out of sight,

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saying *Butig baangi fii. Ekool bi nekk fii* "The store is here. The school is here." As he speaks he points in the direction of one and then the other school, as if he were pointing *at* them and he and his interlocutors could see them. (cf. Talmy 1996 on *fictive demonstrative paths*). This third kind of decentering is involved when a speaker imposes FRONT/BACK orientation on a distant entity by means of the Ego-Opposed strategy as if that entity were immediately perceivable at the location of the speech act in a canonical encounter, as in 21 and 25 above.

To summarize, in order for *gannaaw* to mean 'beyond', its RP must be schematized as an object with sides, and, via the Ego-Opposed strategy, as having a back. Because the Ego-Opposed strategy presupposes the canonical encounter, schematizing a distant object as having a back involves a decentered indexical ground.

It is typical in Senegalese Wolof to describe the location of a place is in terms of its location on a route, as in 21 above. Example 26 below can be taken to represent a more typical case than 21 because 26 was presumably uttered in Senegal and depicts a relatively local scenario. Examples like 26 are impressionistically as common as the type of example in 12c(ii) (*Fale ci gannaaw* 'over there behind') of the marketplace scenario in section 4.4. Whereas the scenario exemplified by 12c(ii) is a plausible motivation for 'later than' *gannaaw* expressions like *gannaaw ëllëg* 'day after tomorrow' that are deictically anchored in the immediate situation of utterance, the scenario exemplified by 26 is a plausible motivation for those uses of 'later than' *gannaaw* that are anchored in aspects of the discourse (cf. section 4.5 above).

26) a. L: *Famakunda fu mu nekkoon?*
Famakunda where 3.SUBJ be.located:PAST
'Where was Famakunda?'

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26) b. T: *Ca* *ginnaaw* *Tambaakunda...*

LOCPREP.DIST back Tambakunda...

"Behind Tambakunda...."

'Beyond/after Tambaakunda....'

[Transcribed conversation. *Démb ak Tey* p. 32]

In an utterance like 26b above, a speaker presupposes that she shares an understanding with her interlocutor of the location of the RP of *gannaaw* (*Tambakunda* in this case) relative to the location of the speech act. Although she thus indexes the "here and now," she does not call attention to any particular aspects of the perceptual field. The conceptualizer's (speaker's and addressee's) knowledge of the location of the RP comes from past experience or hearsay. This contrasts with the case in the marketplace scenario of example 12c(ii).

If the conceptualizer is to impose a schematic BACK on the RP of *gannaaw* in 26 via the Ego-Opposed strategy, she must view the RP relative to a decentered indexical ground of the sort described above for example 25, in which a distant landscape is fictively within the conceptualizer's perceptual-interactive field. In this decentered indexical ground, the conceptualizer's orientation to the RP is partially structured by her knowledge of habitual patterns of travel. That is, the "back" of the RP is the side opposite to the side which a traveler would typically approach on a journey that started at the location of the speech act and went to Famakunda via Tambakunda.

Plausibly, the 'later than' uses in which *gannaaw* appears in a context of shared viewpoint involve decentering as well. It is widely accepted that temporal relations in narrative are understood relative to a fictive "now" that exists in a framework created by the narrative (cf. section 3.2; Almeida 1995, Banfield 1982, Chafe 1994, Fleischman 1990, Zubin and Hewitt 1995:137). Such a framework is a kind of decentered indexical ground (or equivalently in this case, a kind of mental space; Fauconnier 1994/1985, 1997).

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It is plausible that 'later than' *gannaaw* predications conventionally situate the viewpoint of the conceptualizer within the temporal coordinates of a narrative (or other discourse) framework that is at or before the first event of the sequence referred to (cf. Chapter 5; Hill 1978, Traugott 1985a). This would be a case of *shifted deictic center* ("Muhammad goes to the mountain"). Although I am claiming that different kinds of decentering are involved in the Landmark on Route and the 'later than' cases, there is nonetheless a partial analogy between the two cases. In the Landmark on Route case, the RP and figure are construed as being in the configuration in which they would be encountered on a hypothetical journey framed in terms of conventional cultural practices. In the 'later than' case, the RP and figure are conceptualized in the sequence in which they would be presumed to actually occur — i.e., temporal sequence. In both cases, the RP and figure are construed as being in the configuration in which they would be experienced in a presupposable default scenario.[10] The way mental contact is made with the RP is also analogous in the two cases. In both cases making mental contact with the RP involves exploiting knowledge of the current context -- situational context in the Landmark on Route case and discourse context in the 'later than' case. But in neither case is the RP actually available to the conceptualizer in immediate experience.

The Landmark on Route use is thus a plausible experiential grounding for 'later than' *gannaaw*. The Landmark on Route use involves exactly the kinds of understandings of motion and location that structure the Ego-Opposed use in 12c(ii) of the marketplace scenario, with the exception that in the Landmark on Route use, this structure is understood relative to a decentered indexical ground. The Landmark on Route use thus plausibly motivates metaphorical (temporal) uses of the Ego-Opposed strategy that presuppose a shared point of view but are nonetheless not anchored in the "here and now."

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According to the proposal argued for here, an element of shared viewpoint is an essential component of the meaning of 'later than' *gannaaw*. This contrasts sharply with the viewpoint-neutral temporal semantics of BEHIND words (such as English *after* and Japanese *ato*) that are structured by the FRONT/BACK Moving Time metaphor (see Chapter 3). The analysis of 'later than' *gannaaw* presented here thus accords well with the more global analysis of *gannaaw* presented in Robert 1997. In that analysis, the schema that I have called the 'beyond/outside' schema is extended into the realm of discourse, and structures uses of *gannaaw* glossed as 'except' and (rhetorical/causal) 'since'.[11] Robert shows that these uses of *gannaaw*, like the 'later than' use I have focused on, crucially involve considerations of point of view. The temporal semantics of 'later than' *gannaaw* can thus be seen as part of a broader pattern of uses of *gannaaw* that are ultimately based on the Ego-Opposed strategy. Unfortunately, it is not possible to investigate this broader pattern here.

Before closing this chapter, we will look further at uses of 'later than' *gannaaw* that are not automatically predicted by the hypothesis offered here.

4.8. The occurrence of 'later than' *gannaaw* outside of contexts of shared viewpoint.

Although there is a tendency for 'later than' *gannaaw* to occur in contexts of shared viewpoint, we have seen plenty of examples that do not occur in such contexts. This is not surprising because once there is a well-entrenched[12] construction "*gannaaw*-plus-noun" which means 'after', for example *gannaaw ëllëg* 'day after tomorrow', there is nothing to keep speakers from putting other nouns into the noun slot. The motivation for this would be analogy. Another analogical motivation is the existence in Wolof of a preposition that means 'before' as in *balaa midi* 'before noon'.[13] (This preposition does not have a spatial origin.) This spreading of 'later than' *gannaaw* across contexts would also be an example of *generalization* in

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the sense of Bybee, Perkins and Pagliuca 1994:289. Generalization is to be expected because the 'later than' relation is easy to comprehend and extend to new contexts. Also, it is easy to take a default temporal perspective that is at or before the RP. That some Wolof speakers impose perspective on temporal situations more freely than others has already been noted in the discussion of the exceptional phrase *ci kanam fajar* "at front dawn" meaning 'from dawn on' (section 3.2, example 13).

As we have seen, a substantial proportion of tokens of 'later than' *gannaaw* seem to occur in contexts that the hypothesis advanced in this chapter would not automatically predict. The utterances in 27 below contain six of the ten tokens of *gannaaw* listed in the *other noun* row of Table 4.2 (i.e. nouns which occurred outside of "contexts of shared viewpoint").

The context in which 27 occurred was an interview I conducted in Saloum with N, a monolingual speaker of Wolof, in which I got her to explain to me the order of various times of day. In this interview N used sequence-encoding strategies that did not employ *gannaaw* far more frequently than she used strategies with *gannaaw*. Moreover, this strategy with *gannaaw* for talking about sequences of times was used by only one of the seven other monolingual speakers of Wolof from Saloum (Tuubaa Morit) with whom I conducted the same kind of interview.

Some of the data below suggest that Moving Time is a motivation for 'later than' *gannaaw* in certain contexts. For example, just before the occurrence of the first token of *gannaaw*, I had introduced the FRONT/BACK Moving Time metaphor into the discourse with the word *topp* 'follow' and it was taken up by N. There are also utterances which suggest that N is moving in imagination through the times of day whose order she is describing and thus establishing a perspective on which an Ego-Opposed strategy could be based. There is also evidence that N uses words as RPs of *gannaaw* after first establishing their content as topical.

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27)

a. KM: ... *Ban moo topp ci fajar; ndax yoor-yoor*
which 3.SUBJ.FOC follow LOCPREP dawn Q midmorning
moo topp ci fajar?
3.SUBJ.FOC follow LOCPREP dawn
'What follows dawn? Does midmorning follow dawn?'

b. N: *Yoor-yoor, moo topp si suba.*
midmorning 3.SUBJ.FOC follow LOCPREP early.morning
'Midmorning follows early-morning.' [*si* is a variant of *ci*]

Jant bi fenk na, ñów na yoor-yoor,
sun the appear PERF.3 come PERF.3 midmorning
nga julli faaynaange.
you pray [a prayer time]
'The sun has appeared, reached midmorning, you pray *faaynaange*. [N is summarizing the sequence of events/times that we have been talking about.]

c. KM: *Ban moo topp ci yoor-yoor?*
which 3.SUBJ.FOC follow LOCPREP midmorning
'What follows midmorning?'

d. N: *Gannaaw yoor-yoor?*
back midmorning
"Behind midmorning?"
'After midmorning?'

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e. KM: *Waaw.*

'Yes.'

f. N: *Midi.*

'Noon.'

g. KM: *Midi? Aha, gannaaw yoor-yoor midi. Gannaaw midi nag?*

noon aha back midmorning noon back noon then

'Noon? Aha, after midday, noon. After noon then?'

h. N: *Gannaaw midi bëccëg.*

back noon day

"Behind noon day."

'After noon, day.'

i. KM: *Gannaaw bëccëg nag?*

back day then

'After day then?

j. N: *Tisbaar.*

'Early-afternoon prayertime.'

[material omitted]

k. KM: *Lan moo topp ci tisbaar?*

what 3.SUBJ.FOC follow LOCPREP early.afternoon.prayertime

'What follows early-afternoon prayertime?'

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l. N: *Lan moo topp ci tisbaar?*

what 3.SUBJ.FOC follow LOCPREP early.afternoon.prayertime

Tàkkusaan.

late.afternoon.prayertime

'What follows early-afternoon prayertime? Late-afternoon prayertime.'

m. KM: *Tàkkusaan, aha.*

'Late-afternoon prayertime aha.'

n. N: *Bu tàkkusaan paasee, nga dugg ngoon,*

when late.afternoon.prayertime go.beyond:ANT you enter evening,

ngoon. Gannaaw ngoon nag, timis.

evening. back ngoon then timis

"When late-afternoon prayertime has gone beyond, you enter evening, evening. Behind evening then, dusk."

'When late-afternoon prayertime has passed, you enter evening. After evening then, dusk.'

o. KM: *Aha. Gannaaw ngoon, timis.*

'Aha. After *ngoon*, dusk.'

p. N: *Waaw, timis. Gannaaw timis, gee.*

yes dusk back dusk post.dusk.prayertime

Gannaaw gee rekk guddi.

back post.dusk.prayertime only night

'Yes, dusk. After dusk, post-dusk-prayertime. After post-dusk prayertime then, night.'

[sf N]

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In support of the hypothesis that FRONT/BACK Moving Time structures the above example, the image of *following* invoked by *topp* 'follow' in (a) is compatible with the word *gannaaw* in Wolof. For example, there is a set phrase — *topp ci gannaawam* 'follow after him/her/it' — that is used in describing events of physical motion.

In support of the Ego-Opposed strategy, N's discourse is structured in a way that suggests she is taking a perspective on the times she is talking about. A turn that exhibits perspective taking is (n). In *Bu tàkkusaan paasee* 'when late-afternoon prayertime has passed', a decentered locus is set up relative to which the prayertime time goes by. The next phrase, *nga dugg ngoon* 'you enter evening', elaborates (with a Moving Ego metaphor) the role of the imaginary person who is experiencing the times-of-day. In the next phrase, *Gannaaw ngoon...timis* "Behind evening...dusk," *ngoon* 'evening' functions as the RP of *gannaaw*. As seen in Diagram 4.7 below, the phrase *nga dugg ngoon* 'you enter evening' construes evening as a place which Ego occupies or is about to occupy. This metaphorical spatial relationship between Ego and 'evening' suggests an Ego-Opposed construal of 'evening' as the RP of *gannaaw* in *Gannaaw ngoon...timis* "Behind evening...dusk." (See Chapter 6 for more discussion of construals that involve more than one metaphor and more than one clause.)

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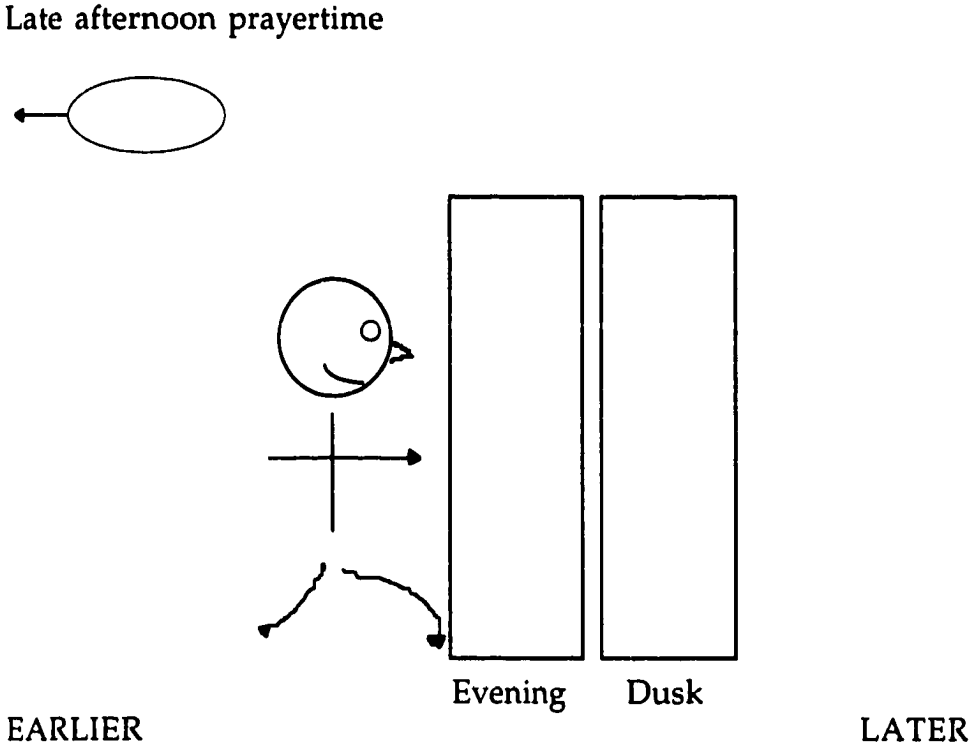


Diagram 4.7: "When late-afternoon prayertime has passed, you enter evening ... behind evening: dusk." (Cf. example 27n.)

Another important aspect of the discourse in 27 has to do with the way N establishes RPs of *gannaaw* as topics. This also is exemplified by (n), in which N establishes *ngoon* 'evening' as topical before using it as the RP of *gannaaw*: *Bu tàkkusaan paasee, nga dugg ngoon, ngoon. Gannaaw ngoon nag, timis.* "When the late afternoon prayertime passes, you enter evening, evening. Behind (*gannaaw*) evening then, dusk." In fact, in every instance in 27, the RP of *gannaaw* is topical.

In this subsection we have seen evidence that *gannaaw* may instantiate the FRONT/BACK Moving Time metaphor. It is also possible to explain the examples in this section by saying that the speaker was taking a certain perspective on the times-of-day and using an Ego-Opposed strategy. I do not

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know if it is possible to decide between the two strategies for these data. Native speakers have various well-motivated conceptual options open to them. To the extent we can determine which strategy a speaker uses in a given case, it may be more a matter of habit than of rule.

4.9. Conclusions.

In Chapter 3 we distinguished FRONT/BACK Moving Time from Ego-centered Moving Time based on considerations of point of view. In this chapter we have singled out the Ego-Opposed strategy, which is latent in Ego-centered Moving Time, as a motivation for the 'later than' meaning of *gannaaw*. The arguments of Chapter 3 would lead us to predict that a scenario of experiential grounding that depends crucially on Ego's point of view would motivate metaphorical expressions that show effects of being grounded in a particular point of view, regardless of whether or not the RP in the expression is metaphorically co-located with Ego. If the findings of the current chapter are correct, we have a case in which an Ego-centered experiential grounding tends to motivate linguistic expressions that show effects of point of view, even though the RP is not actually Ego's body or co-located with Ego.

Metaphor theorists (e.g., Lakoff and Johnson 1980 1999; Lakoff and Turner 1989; Grady 1997a; Taub 1997; Turner 1991; Sweetser 1990) have focused attention on the structure of conceptual mappings and not paid a great deal of attention to how the details of language use might affect metaphorical mappings. Grammaticalization theorists (e.g., Bybee, Perkins and Pagliuca 1994; Taub 1998) have tended to see explanations that appeal to context as alternatives to ones that involve metaphor. Heine, Claudi, and Hünnemeyer (1991a,b) have recognized a connection between change-in-context and metaphor. They have stated metaphorical correspondences in broad terms like *space* > *time* but have not probed for the precise details of the conceptual mappings involved. This chapter has examined how a specific

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metaphorical mapping — the Ego-Opposed temporal metaphor — in specific contexts influences semantic extension. I have talked about this in terms of linguistic practice (Hanks 1990, 1996a,b; cf. C. Johnson 1999a,b). As a result of this approach we have gained some insight into *gannaaw*'s peculiar pattern of semantic extension. This is of general interest in showing how conceptual mapping and linguistic practice interact.

Recall that in Chapter 2 I argued that physical motion/location uses of a particular word — *fekk* 'become co-located with' — influenced the status of a version of the Moving Time metaphor in Wolof vs. English. In that case the role of linguistic practice was less visible because of the crucial lexical-semantic differences between the Wolof and English words we were comparing — *fekk* and *find*. By contrast, the case of *gannaaw* does not involve such a striking lexical-semantic contrast, and the role of linguistic practice is relatively more prominent. Nonetheless, the range of *gannaaw*'s polysemy is impressive and the exact nature of the relationship between the various nontemporal meanings and the 'later than' use remains to be discovered.

One important aspect of an approach in terms of linguistic practice is the characterization of linguistic phenomena more in terms of habits than rules. Such a characterization of language is in fundamental agreement with a *usage*-based grammatical theory such as that of Langacker 1987, 1991 (see for example Langacker 1987 on *entrenchment*), and has points in common with Hopper's theory of *emergent grammar* (see Hopper 1998; cf. Givón 1999). Connectionist approaches to language are also in principle compatible with a linguistic-practice approach (Allen and Seidenberg 1999, Merriman 1999, Regier 1996). The approach in terms of linguistic practice has allowed us to have an account of 'later than' *gannaaw* that involves a high degree of variation across speakers and contexts. The next chapter will look further at the kind of inter-speaker variation that we saw in the case of *gannaaw*.

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Notes.

[1] Ideas and material from portions of this chapter are to appear in *Proceedings of the Twenty-Fifth Annual Meeting of the Berkeley Linguistics Society*, as "Metaphor, linguistic practice, and the temporal meanings of *gannaaw* 'back' and *kanam* 'front' in Wolof."

[2] The texts are Jeŋ 1992, a novelette, and Dieng 1993, which is mostly transcribed oral performance.

[3] Gamble 1991a lists *gannaaw loolu* as meaning 'after that'; this relates to a point that will be discussed below. *Dictionnaire wolof-français* (Fal, Santos, and Doneux 1990) does list one entry of *gannaaw* as "part[icule] de liaison 'Après, comme, puisque'," but this suggests that the temporal semantics are not felt to be central, since *après* 'after' is grouped under the same entry as *comme* 'as' and *puisque* 'since'.

[4] See Brugman 1983, Fillmore 1997/1971, Lakoff and Johnson 1980, Rubba 1994. Vandeloise (1991:39) and Hill (1978) call Ego Opposed *mirror image*. Cf. Allan 1995. Levinson (1996b) calls it a *relative* strategy.

[5] Munro and Gaye also include *gannaawaati ëllëg* "behind tomorrow again" 'in three days'. I have normalized their spellings to the Senegalese system.

[6] Actually, 4% can be given a separate account based on the fact that their RP is a person.

[7] As Fillmore 1997/1971 points out, if you take a box with four sides and paint a face on one side and a tail on the opposite side, you have in a sense transformed those sides into a front and a back. The point is that a *front* or a *back* is a kind of a side.

[8] More specifically, what I refer to as *schematization* is discussed by Talmy under the headings of *idealization*, *abstraction*, and *topology*.

[9] Example 25 is from Robert 1997 where she discusses in terms of *abstract viewpoint* some of the issues I am discussing here. Part of what I say is not explicit in the 1997 article but comes from discussions with Stéphane Robert.

[10] Fleischman (1990) has noted that the unmarked order of narrative sequence is iconic of the order in which the events of the narrative would be presumed to actually happen.

[11] On this view, there is an orientation that creates an asymmetry with respect to a boundary (RP), and what the *gannaaw* predication refers to is the abstract space beyond the boundary [Robert 1997:123]).This involves a metaphorical construal of a discourse as a region.

[12] *Entrenchment* (Langacker 1987) has to do with the conventionalization of a form-meaning pairing through repeated use.

[13] Another potential source of analogy is the French word *après* 'after'. There is a significant population of Wolof-French bilinguals in Senegal. There is also massive borrowing of French vocabulary into Wolof. (The word *apre* has been borrowed into Wolof [from *après*], apparently with the meaning *gannaaw loolu* 'after that'. I do not know how this borrowing would affect the evolution of 'later than' *gannaaw*.)

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5

Linguistic variation and modes of construal

5.1. Introduction.

This chapter is concerned with the linguistic relevance of the human ability to adopt alternate construals of a given situation (Fillmore 1983, Lakoff 1987, Lakoff and Johnson 1980, Langacker 1987, 1991; Talmy 1983, 1988, 1996). In the cases we will consider, the way different cognitive structures manifest themselves in different linguistic structures is better characterized in terms of habit than rule (Hanks 1990, 1996a; Haviland 1996, Hopper 1998, Langacker 1987, 1991). Variation in habitual construal results in linguistic variation -- different speakers tend to use different linguistic forms. Understanding this variation as variation in native-speaker habit rather than violations of rules makes it seem natural rather than anomalous.

An important feature of construal is the point of view from which a given situation is construed. After looking at work that shows the importance in linguistic description of taking account of how certain linguistic forms are sensitive to the notion of point of view, we will then see how point of view interacts with other aspects of construal.

5.2. Point of view and the grammaticalization of future markers from COME and GO.

In the world's languages, future markers are known to develop both from words meaning COME and from words meaning GO (Bybee, Perkins, and Pagliuca 1994, Fleischman 1982a,b; Sweetser 1988, Traugott 1978, Ultan 1978). Fleischman (1982a,b) has put forth the idea that it is more natural for future markers to develop from words meaning GO than from words meaning COME.

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Fleischman (1982b) suggests that if a GO or COME verb develops into a tense marker via a movement metaphor for time, GO would develop via Moving Ego and COME would develop via Moving Time. Her hypothesis is that this is because according to Moving Ego, Ego is going toward future events; whereas according to Moving Time, future events are metaphorically coming toward Ego (p324). Fleischman further suggests that Moving Ego is the more natural of the two metaphors for expressing tense relationships, because such relationships are by definition Ego-oriented (p. 328). Since according to the Moving-Ego-type mapping GO rather than COME is expected to evolve into a future marker, GO is presumed in general to be a better candidate for a future marker than COME. Sweetser 1988 goes into detail on the issue of why a GO verb is well suited to become a future marker. The reasoning is that the kind of motion event encoded by GO is not only (image-)schematically parallel to a change from present to future, but also parallel in terms of the deictic concepts involved. Just as GO codes movement away from the deictic center, the experience of change from present to future starts with a state (i.e., the present), that is an element of the deictic center and ends with a state (the future) that is not yet experienced — i.e. non-immediate — and therefore appropriately deictically coded as distal.

Emanatian (1992) discusses the case of Chagga, an Eastern Bantu language of Tanzania, in which a GO and a COME verb both seem to be grammaticalizing as future markers. The GO verb is *-nde-*, and the COME verb is *-che-* (they are reduced forms of *ienda* and *icha*, respectively). These verbs appear in temporal meanings as in 1 below.

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(Chagga)

1) a. *naí ' n̲d̲ésómá úláya*
FOC:SM:3SG:PROG:go:to:study:IND Europe
'She's going to study in Europe.'
[Emanatian 1992:15][1]

b. *naí ' c̲h̲ésómá úláya*
FOC:SM:3SG:PROG:come:to:study:IND Europe
'She's coming to study in Europe' / 'She'll study in Europe.'
[Emanatian 1992:5]

Emanatian argues that both *-che-* and *-nde-* instantiate a Moving-Ego-like mapping in which the occurrence of a future time is construed in terms of change of location undergone by Ego. What makes it possible for a COME verb to instantiate a Moving Ego mapping is, of course, *decentering*: The metaphorical motion coded by *-che-* is conceived of as occurring relative to a decentered indexical ground.

We saw examples of this sort of decentering in Chapter 2 involving the word *come*, which can be used in certain contexts in which the goal of motion is not the location of the speaker (Fillmore 1997/1971). Chagga *-cha* 'come' (a form of *icha*), like English *come*, codes movement toward the speaker in default cases but can also be used in certain cases where the goal of motion is not the speaker's location. Emanatian argues that the same process of decentering that allows speakers to use *-cha* 'come' when they are not at the goal of physical motion also allows them to use *-che-* 'come' to talk about a future event. She provides a motion example from Chagga that translates as 'I'm coming to Boston next month', said in a context in which neither the speaker nor the addressee was in Boston (p.7). It is argued that motion in this case is construed from the viewpoint of the goal, which was the expected

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location of the addressee at the time the speaker's future arrival in Boston. Essentially the same process of decentering is claimed to occur in the case of 1b above. The occurrence of an event is depicted metaphorically as an arrival which is conceived of from a point of view situated at the goal of metaphorical motion. That is, the temporal *-che-* 'come' predication is construed from a viewpoint that is situated in the future relative to the time of speaking.

The point-of-view shift that Emanatian proposes for the temporal metaphor is extremely well-motivated. Note that in the Source-Domain example she provides, the addressee is expected to be at the goal of motion at the time that the mover arrives there. This satisfies one of the ways that the felicity conditions of physical uses of *come* can be satisfied (Fillmore 1997/1971) — the speaker or addressee is expected to be located at the goal of motion at the time that the motion event occurs. Since the motion event is expected to occur in the future relative to the speech event, the felicity conditions on this physical motion use of *come* are satisfied by a situation that is expected to obtain in the future. Thus, this Source-Domain use of *come* involves a shift of the speaker's perspective to a future situation, and thus to the future time when that situation obtains. Assuming that the felicity conditions of *-che-* are similar to those of *come*, the shift in perspective that Emanatian claims is involved in temporal uses of *-che-* is directly grounded in physical-motion uses.

Emanatian's work shows the importance of deixis and decentering in how temporal metaphors encode meaning. In the rest of this chapter we will continue to explore the linguistic relevance of the human ability to adopt alternate construals, including alternate points of view.

5.3. Previous discussions of the Ego-Opposed strategy and temporal relations.

In chapters 2 and 3 what concerned us regarding point of view was the contrast between predications that presuppose a point of view rooted in "now" vs. those that do not. For example, the temporal relation coded by

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coming in *Christmas is coming* is understood relative to "now", but the relation coded by *follow* in *A reception will follow the ceremony* is understood relative to the time of the ceremony. Then in Chapter 4, I claimed that a conventional point-of-view shift was relevant to *gannaaw* 'back' expressions such as the one in 2 below: The sequence of events involved is construed from a point of view that is fictively at or earlier than the RP of *gannaaw*. (The RP is coded by zero in this example.)

2) *Gannaaw ñu dem ci dë ton.*
back they go LOCPREP two ton
"Behind they went to two-tons"
'After(ward) they went to two-ton trucks.' (I.e., they started using two-ton trucks.)
[att.] [s F 101597]

At this point, it is appropriate to briefly compare my understanding of Ego-Opposed structures with earlier analyses. The Ego-Opposed strategy was proposed as a motivation for FRONT/BACK temporal terms independently by Hill (1978) and by Traugott (1975,1985a). The proposal was essentially that a sequence of points or periods in time is conceptualized from a point of view which is located earlier than the earliest point in the sequence. Relative to that point of view, then, earlier times are in front of later ones, and later ones are behind.

I have claimed that there tend to be mechanisms that establish a shared point of view in the contexts in which Wolof *gannaaw* 'back' is used to mean 'later than'. Hill's and Traugott's analyses differ from mine in that they treat the Ego-Opposed strategy more like a default strategy that could be applied in any context. Hill's and Traugott's formulations are similar to Ego-centered Moving Time in that they involve a particular point of view relative to which times are oriented, and this point of view is assumed to be relevant in any situation that the linguistic form in question (e.g. a BACK word) is used.

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Whereas the Ego-centered Moving Time metaphor runs into trouble because it does not predict the deictic neutrality of FRONT/BACK temporal expressions, a problem for the type of Ego-Opposed strategy that Traugott and Hill proposed is that it does not predict the fact that FRONT/BACK expressions can be used deictically. We saw such deictic uses in Chapter 3 in Japanese. The problem is that deictic uses are best characterized in terms of Ego being at the RP, but the Traugott/Hill proposal requires that Ego always view temporal relations from a perspective that is earlier than both RP and figure. An example from Chapter 3 of a deictic use of Japanese *mae* 'front' is repeated below.

(Japanese)

3) *Mae ni asonda koto ga aru.*
front LOC play:PAST fact NOM exist/have
"(We) have the fact that (we) played at front."
'We have played before.'
[YH]

Another problem with assuming that the Ego-Opposed strategy motivates FRONT/BACK temporal expressions in Japanese is that *ato* 'behind a moving entity' does not have a physical Ego-Opposed use that could serve as a Source for its temporal uses. That is, one could not say the equivalent of *The ball is behind the rock* in Japanese using *ato* to convey the notion BEHIND. For Ego-Opposed expressions involving BACK/BEHIND, Japanese employs the words *usiro, mukoo,* or *mukoogawa* (Ohara 1990). A related fact that favors a Moving Time account for Japanese is that physical uses of *ato* involve a moving RP.

The use of the Ego-Opposed strategy which I proposed in Chapter 4 is fundamentally different from Traugott's proposal, which sought to motivate non-deictic uses of EARLIER=IN-FRONT and LATER=BEHIND expressions. Also,

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Traugott's and Hill's proposals saw Ego-Opposed as motivating the symmetrical uses of FRONT and BACK words, whereas I have sought to motivate the asymmetrical use of Wolof *gannaaw* 'back' to mean 'later than' in the absence of a symmetrical 'earlier than' use of *kanam* 'front'.

5.4. Variation in construal.

It was established in Chapter 4 that in Wolof, 'later than' *gannaaw* tends to be used in ways that reflect considerations of point of view. But about a quarter of the text-count data in section 4.6 does not appear to robustly reflect this tendency. What I want to discuss here is how this kind of variation should be understood. My claim will be that the taking up of a point of view is something that involves a large measure of (unconscious) personal choice, and thus point-of-view effects should be expected to vary across speakers in a language (as well as across languages). However, there are factors which constrain the variation. Thus the study of how people assume points of view is useful in linguistic description.

An important instance of variation in point-of-view taking, which we saw in Chapter 3, involves deictic restrictions on LATER=IN-FRONT and EARLIER=BEHIND expressions. In Wolof there is an overwhelming tendency for *kanam* 'front' to be deictically grounded in temporal uses, but we saw the exception *ci kanam fajar* "in front of dawn" meaning 'from dawn on'. Since the patterns of use involved with temporal *kanam* are relatively clear cut, an investigation of the inter-speaker variation in its use will be revealing and give us a basis for comparison with the case of 'later than' *gannaaw* where the patterns of variation are much harder to discern. The study of temporal *kanam* is also relevant to the observed crosslinguistic tendency for FRONT terms to be deictically grounded when they code the 'later than' relation. Recall that we saw exceptions to this tendency in Spanish and Hausa. The following example from Hill 1978 exemplifies the type of exception we saw.[2]

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(Hausa)

4) a. *ranar Talata tana gaba da ranar Littinin*
'Tuesday is in front of Monday.' (*tana* 'Third person feminine singular personal pronoun with suffix of continuous tense'; *gaba* 'front'; *da* 'together with' or 'than'.)[3]
[Monday is similarly coded as being 'behind' Tuesday.]
[Hill 1978:536]

There are two issues that Hill discusses that are important to the questions we are considering here. One is the way that Hausa speakers assign a front and a back to a physical object that does not have an inherent front or back, such as a stone. Hill has found that the way speakers use these strategies varies within speech communities as well as between communities. The other issue is that speakers assign FRONT and BACK in different ways in sentences like 4 depending on the nature of the RP.

In addition to the Ego-Opposed strategy that we have discussed, in which a RP is assigned a front and a back as if it were facing Ego, Hausa speakers have an *Ego-Aligned*[4] strategy in which an object is assigned a front and a back as if it were facing in the same direction as Ego. According to Hill, the Ego-Opposed strategy tends to be used in Hausa when the RP hides the figure; for example, a ball hidden by a tree would be "behind" the tree (cf. Vandeloise 1991). The Ego-Aligned strategy tends to be used when the RP does not hide the figure; for example, a ball visible on the far side of a rock would be "in front of" the rock. The tendency to assign Ego-Aligned orientation is strengthened in a scenario of motion; for example if the rock and the ball were aligned with Ego in front of her on her projected path of motion, the Ego-Aligned strategy would be more likely.

Hill reports an interesting pattern of variation in how Hausa speakers talk about temporal relations. The variation has to do with whether the times

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being talked about are members of culturally recognized sequences, as in 4a above, or just the times of ordinary events, as in 4b below.

4) b. *Dauda ya zo bayan Saratu ta fita.*
'Dauda came after Sarah left.' (*fita* 'go out'; *baya* 'in back of', *bayan* is the genitive of *baya*; *ta* '3rd fem. sing. personal pronoun'; *ya* '3rd masc. sing. personal pronoun'; *zo* 'come'.) [A parallel sentence with *gaba* 'front' is not available.]
[Hill 1978:530]

On my analysis (which differs from Hill's), example 4b is structured by the FRONT/BACK Moving Time metaphor in the same way as the Japanese examples with *ato* 'behind' that we saw in Chapter 3. Example 4a is structured by the Moving Ego metaphor in concert with the Ego-Aligned strategy. According to this hypothesis, Ego views the sequence of weekdays as if they were places on a linear path. Ego imposes a back-to-front orientation on the weekdays based on her metaphorical direction of motion and bodily orientation. Due to this imposed orientation, later times are construed as being metaphorically in front of earlier times. My claim is that if the times in question occur in a fixed sequence that is known to members of a culture, Ego can assume a viewpoint relative to that sequence and be confident that the viewpoint is shared by her interlocutor. This makes it possible to align the metaphorically body-based temporal field with the sequence of times in a single frame of reference. I will call such a sequence of named members of temporal cycles a sequence of *positional terms* (Fillmore 1997/1971:50). In addition to days of the week, other examples of sequences of positional terms are the times of the day (e.g. *morning, afternoon, evening*), the months of the year, and the holidays in the year; e.g., *New Year's Day, Martin Luther King Jr.'s birthday, Valentine's day, Easter, Halloween, Thanksgiving, Christmas.*

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This hypothesis is consistent with the fact that events such as those in 4b, which are not anchored in a positional sequence (i.e. sequence of positional terms), are not talked about in terms of a LATER=IN-FRONT orientation. The reason for this is that there is no culturally shared framework available that the body-based field could be aligned to. My hypothesis is that orientation toward a positional sequence is a motivation for using the Moving Ego metaphor, but a weaker one than deictic anchoring. It is plausible that people find it natural to take up a point of view within a temporal sequence because one can typically expect to experience such sequences (e.g. *Monday, Tuesday etc.)*, and thus metaphorically be at some point within them in the future. By contrast, this is not true of events that already happened and are not expected to repeat (e.g. Dauda's coming after Sarah's leaving). Orientation to a positional sequence is a likely motivation for the exceptional Wolof utterance of *ci kanam fajar*, 'from dawn on', since *fajar* 'dawn' is a term in a positional sequence.

My analysis is inspired by Hill's analysis (as I understand it) which is that speakers use the Ego-Aligned strategy in 4a because they know the temporal locations of the days of the week and this is analogous to a spatial situation in which they can see both the figure and the RP. My analysis is also consistent with Hill's observation that a scenario of movement makes speakers more likely to use the Ego-Aligned strategy. To summarize, I argue that it is the forward movement involved in the grounding scenario of the Moving Ego metaphor that provides the FRONT/BACK directionality that Ego imposes on positional terms like 'Monday' or 'dawn' via the Ego-Aligned strategy.

Hill also discusses questions of inter-speaker variation that are directly relevant to the questions we are considering. In a pilot study, he investigated how Hausa speakers conceived of the relationships between the days denoted by the monomorphemic terms *gobe* 'tomorrow' and *jibi* 'the day after

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tomorrow'. He asked his subjects to complete the following sentence (presumably with either *gaba* 'in front of' or *baya* 'in back of'.)

5) *jibi yana* _____ *da gobe.* (p. 528)
(*yana* '3rd singular masculine pronoun with the suffix of the continuous tense'; *da* 'together with' or 'than'.)
"The day after tomorrow is _____ tomorrow."[5]

Hill reports that a substantial majority of Hausa speakers select *gaba* 'in front of', thus reflecting use of the Ego-Aligned strategy. On my analysis, the deictic anchoring of the terms 'tomorrow' and 'day after tomorrow' motivates Moving Ego and thus an Ego-Aligned strategy. But what is of most interest in the present context is that not all the speakers selected *gaba* 'in front of'. Presumably, some selected *baya* 'in back of'. Thus, while there is a predominant tendency to view a situation like the one in 5 above in a certain way, the individual choices that speakers make are not always the same.

In fact, Hill suggests that the Ego-Aligned and Ego-Opposed strategies are both used in all languages. Hill cites research (Harris and Strommen 1972) in which nearly two-thirds of (presumably English-speaking) four-to-seven-year-old children used the Ego-Opposed strategy in responding to a request to put a red block *in front of* a green one. Almost one-third used the Ego-Aligned strategy. In another study, Hill found that more than ninety percent of adult speakers of Standard English used the Ego-Opposed strategy in describing the locations of objects. The variation is nonetheless noteworthy, since perhaps almost ten percent used the Ego-Aligned strategy, thus construing the situation differently from the other ninety percent of adult respondents.

Similar variation has been found in studies such as the following from Hill (1982:35). Secondary school students were presented with a picture drawn from a perspective in back of and slightly to the right of a woman who is

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looking at a rock and a ball in front of her, where the rock is between the woman and the ball. The students were asked to fill in the following blank.

The ball is _____ the rock.

A. on	B. in front of
C. behind	D. to the left of

The following percentages of students using an Ego-Aligned strategy (i.e. *in front of*) were reported.

Hausa students responding in Hausa:	62.2%
Hausa students responding in English:	34.4%
American students:	2.6%

To summarize, strategies such as Ego-Opposed and Ego-Aligned are not rules to be followed, but rather motivations for ways of talking about things. The strategies are instantiated variably across and within language communities.

5.5. Variation within Wolof.

In this section we discuss the variation we have observed in how Wolof speakers use *kanam* 'front' and *gannaaw* 'back' to talk about temporal relations. It was suggested above that what made the unconventional utterance in 6 below possible is that the speaker had a metaphorical understanding of his orientation to the past and future in terms of his bodily FRONT/BACK axis, and that he aligned this orientation to the sequence of positional terms that includes *fajar* 'dawn'. Thus, since the future was in front of him, later times were construed as being in front of *fajar* 'dawn' because they were construed as being in the future relative to *fajar*.

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6) *ci* *kanam fajar*
LOCPREP front dawn
"in front of dawn"
'from dawn on'
[att.] (Repeated from Chapter 3)

I suggested that this alignment is possible relative to a positional sequence but would not be possible relative to the times of events, such as events of people leaving, which are not conventionally ordered, as we saw in the Hausa data in example 4. Evidence that this assessment is valid for Wolof comes from the following judgments, which are shared by some, but not all, Wolof speakers. The data in 7 below show that speakers (who share the judgment) can locate the forward motion of a Moving Ego relative to a positional term, but not relative to the time of an ordinary event.

Example 7a shows a Moving Time use of the verb *weesu* 'go beyond' in which the RP is Ego's "now." (*Weesu* appears in inflected form as *weesoo*.) Example 7b shows that the situation is different if the metaphor is Moving Ego and the RP is an ordinary event: Not all speakers are able to metaphorically locate Ego's forward movement relative to a RP that is not independently locatable in a culturally shared framework (cf. Moore 1997a:222).

7) a. *Ba* *xuloo* *ba* *weesoo,* *ñépp* *a* *nelaw.*
when quarrel the go.beyond:ANT, everybody 3.SUBJ.FOC sleep
"When the quarrel had gone by, everybody fell asleep."
'When the quarrel was over, everybody fell asleep.'

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7) b. *%?Ba ñu weesoo xuloo ba, ñépp a nelaw.*
when we go.beyond:ANT quarrel the everybody 3.SUBJ.FOC sleep
"When we had gone beyond the quarrel, everybody fell asleep."
'When the quarrel was over, everybody fell asleep' (as in (a) above).

Example 7c below shows that there is no problem in locating Ego's forward movement relative to a positional term; i.e., a time that is independently locatable in a culturally shared framework. *Tabaski* in 7c is a major holiday.

7) c. *Bi ñu weesoo tabaski, ci la*
when we go.beyond Tabaski, LOCPREP NONSUBJ.FOC.3
suma taaw bi juddu.
my firstborn the be.born
"It was when we had gone beyond Tabaski that my first child was born." 'It was after Tabaski that my first child was born.'

The examples in 7 above are relevant to the discussion in two ways. First, 7 shows that the possibility of construing a given temporal relation in terms of the Moving Ego metaphor is constrained for some speakers by whether the potential RP of the Moving Ego metaphor is a positional term or not. Second, the fact that not all speakers have the same judgment on the sentences in question exemplifies the major theme of this chapter — there is inter-speaker variation involving different strategies of construal (relative to the FRONT/BACK axis).

Metaconceptual judgments and variation in Wolof.

The discussion in this subsection takes as its starting point the data in 8 below, repeated from Section 4.4, where the data were used to argue that the Ego-Opposed conceptual strategy is available to Wolof speakers for talking

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about temporal experience. What I want to do here is further demonstrate inter-speaker variation in the application of conceptual strategies like Ego-Opposed and Ego-Aligned. 8a was uttered for the purpose of explaining the meaning of the term *daaw-jéeg* 'year before last'.

8) a. T: *Daaw-jéeg* *mooy* *gannaaw daaw.*
year.before.last 3.SUBJFOC:IMPF back last.year
'The year before last is behind last year.'
[att.] [s T]

b. KM: *Déwén-jéeg* *nag*?
year.after.next then
'And the year after next?'

c. T: *Mooy* *gannaaw déwén.*
3.SUBJFOC:IMPF back next.year
'It's behind next year.'

8a and 8c are not judged to be acceptable by native speakers nor are they the sort of utterance that tends to occur in spontaneous speech. Nonetheless 8a was said spontaneously by a monolingual speaker, it conveyed the meaning it was intended to convey, and it was not felt to be a mistake.

8a was uttered as a way of explaining something — as such it was a *metaconceptual* utterance, an utterance that was intended to characterize a concept. Most of the data in this subsection consist of elicited judgments on what speakers consider to be valid characterizations of temporal relations considered abstractly. As such, these are judgments about concepts and not judgments about what is acceptable or ordinary language use. Thus these data are related only indirectly to actual language use. Nonetheless, the data reveal something about how speakers conceptualize what they talk about (cf. Hanks 1993).

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I elicited data from three speakers[6] in addition to T on the subject of 8 above; i.e., data on the metaphorical position of 'the year after next' with respect to 'next year' and of 'the year before last' with respect to 'last year'. The judgments of two of these three agreed with those of T; those of the other, G, did not. G characterized the relationships in Ego-Aligned terms:

9) a. KM: *Déwén-jéeg fan lay*
year.after.next where NONSUBJ.FOC.3:IMPF
féete ak déwén?
be.situated with next.year
'Where is the year after next situated with respect to next year?'

b. G: ... *Déwén-jéeg fan lay*
year.after.next where NONSUBJ.FOC.3
féete ak déwén? — ci kanam.
be.situated with next.year — LOCPREP front
'Where is the year after next situated with respect to next year?
— In front.'

c. KM: *Kon gannaaw-ëllëg fan la*
therefore BEHIND-TOMORROW where NONSUBJ.FOC.3
féete ak ëllëg?
be.situated with tomorrow
'So where is the day after tomorrow (literally "behind-tomorrow") situated with respect to tomorrow?'

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9) d. G: ... *Gannaaw-ëllëg?* *Ci* *kanam la*
BEHIND-TOMORROW LOCPREP front NONSUBJ.FOC.3
féetewoo *ëllëg.*
be.situated:SIML.RCPR tomorrow
"Behind-tomorrow? It is situated in front of tomorrow."
'Day after tomorrow? It's situated in front of tomorrow.'

e. KM: *Léegi nag* *daaw-jéeg,* *fan* *la*
now PRTCLE year.before.last where NONSUBJ.FOC.3
féete *ak* *daaw?*
be.situated with last.year
'Now then, where is the year before last situated with respect to last year?'

f. G: *Gannaawam.*
back:3.GEN
'Behind it.'
[s G, 12.27.97]

The data in 9 are evidence of the Ego-Aligned strategy because in 9 later times are metaphorically in front of earlier ones. Times are thus aligned with a structure imposed by the Moving Ego metaphor. Taken together, the data in 8 and 9 show that both the Ego-Opposed and Ego-Aligned strategies are available to Wolof speakers for talking about temporal experience. To my knowledge, the Ego-Aligned strategy does not play a role in any conventional temporal expressions in Wolof. Nonetheless it exists in the speech-community and is probably responsible for the unconventional expression *ci kanam fajar* 'from dawn on'.

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In addition to seeing evidence for the Ego-Aligned strategy, we have also seen important evidence for inter-speaker variation: Of the four speakers from whom we have data, three used the Ego-Opposed strategy and one used the Ego-Aligned strategy. Variation such as this plausibly accounts for the fact that not all speakers accept *ci kanam fajar* 'from dawn on'. Moreover, the assumption that most speakers (unconsciously) disprefer the Ego-Aligned strategy would explain why there are no conventional temporal expressions in Wolof in which the RP of temporal *kanam* 'front' is not deictically anchored, given the arguments I have offered for why temporal *kanam* expressions should be deictically anchored.

While speakers seem to prefer one strategy over another, in at least some cases they probably have conceptual access to more than one strategy. In example 9d, G characterized the *day after tomorrow* as being 'in front of' tomorrow. A literal paraphrase of what he said might be "*Behind-tomorrow* is in front of tomorrow." Presumably, G understands the meaning of *gannaaw ëllëg* 'day after tomorrow' in 9 because it is a conventional expression in the language and not by paying attention to its metaphorical structure, since the structure of the expression is opposite to his characterization of the concept. But it would be wrong to conclude from 9d that the literal meaning of *gannaaw ëllëg* — "behind tomorrow" — has nothing to do with how G conceptualizes temporal experience, or that the expression *gannaaw ëllëg* is not metaphorically motivated.

Example 9d would be evidence for such conclusions only on the assumption that a given speaker has only one conceptualization of a given state of affairs, but in fact we know that individuals are capable of multiple conceptualizations of the same state of affairs. To take a simple example, if there is a basketball on the ground near the headlights of an automobile and I am sitting on the ground at the rear of the car, I can refer to the basketball as either *in front of* or *behind* the car depending on whether I have the car's intrinsic orientation in mind or am imposing an orientation on the car by means of the Ego-Opposed strategy. (Fillmore 1997/1971, Talmy 1983,

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Vandeloise 1991). Thus, the fact that G characterized the temporal relationship between *tomorrow* and *day after tomorrow* in a way that is the opposite of the conventional *gannaaw ëllëg* does not mean that G lacks a metaphorical understanding of the conventional expression.

We now return to the specific claim that the Ego-Aligned conceptual strategy could structure an utterance like *ci kanam fajar* 'from dawn on' for some but not all speakers. This claim is supported by the following judgments from G, which were elicited before the data in 9 above were elicited.[7] The data in 10 below show that it is possible for a Wolof speaker to construe the temporal relationship between nondeictic positional terms, in this case months, by means of the Ego-Aligned strategy. The lunar months that G mentions occur in the order *baraxlu, koor* ('Ramadan'), *(k)ori*. G offers the judgment that *baraxlu* is behind *koor* and *ori* is in front of *koor*. (He makes it clear however that this is not how one would ordinarily talk about this temporal relationship.)

10) a. ... *Gannaaw bi koor paasee*
behind when Ramadan go.beyond:ANT
la ori door a ñów.
NONSUBJ.FOC.3 Ori begin MBA come
'After Ramadan has passed, Ori comes.'

b. ... *Kon moom ci kanamu koor*
therefore 3.EMPH LOCPREP front:PD Ramadan
la xam nga.
NONSUBJ.FOC.3 know PERF.2
'Therefore it is in front of Ramadan, you know.'

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10) c. *Aa kii, baraxlu, moo nekk*

this.one Baraxlu SUBJ.FOC.3 be.located

ci gannaaw koor.

LOCPREP back Ramadan

[s G, 12.27.97]

'Ah this one, Baraxlu, it is located behind Ramadan.'

In 10, G construes the months according to the Ego-Aligned strategy so that later months are in front of earlier months, just as he construes 'the year after next' as in front of 'next year' in 9. Following is an account of the kind of conceptual structure that might be involved in the construals in 10.

Let us take as a starting point the fact that G offers 10a as a reason to believe 10b. In (a), G depicts the sequential relationship between *koor* and *ori* with the Ego-centered Moving Time metaphor. G thus establishes a decentered indexical ground within the sequence of months: metaphorically G's viewpoint is at a location which the months, construed as moving objects, go past. From this fictive perspective, when Ramadan passes Ego's location, Ori comes. Essentially what G does here is confirm the order of the months by establishing, by means of the Ego-centered Moving Time metaphor, the fact that Ramadan is in the past with respect to Ori. This is depicted in Diagram 5.1 below.

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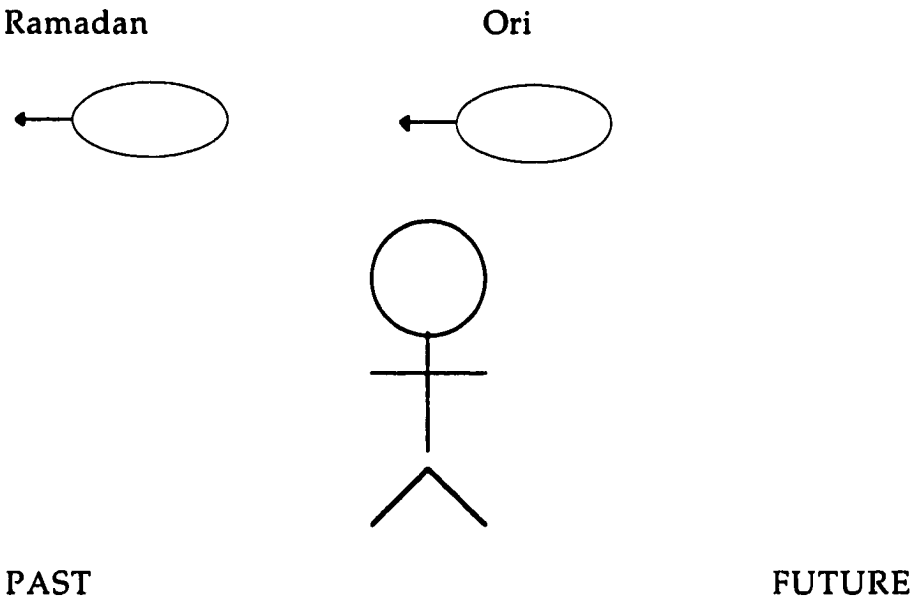


Diagram 5.1: "After Ramadan has passed, Ori comes."

Next, what G appears to do is fictively remain within the sequence of months which he has just verified, but now the Moving Time metaphor is no longer active, although the construal of the months as entities in linear order persists. G then construes the months as a series of locations according to the Moving Ego metaphor, and transfers his FRONT/BACK orientation to the months in the series, as depicted in Diagram 5.2 below. I do not think he assumes any particular fictive position within the series. For simplicity's sake, Ego is depicted in Diagram 5.2 below in the same position relative to the months as in Diagram 5.1 above.[8] (There is more discussion in Chapter 6 of utterances that combine metaphorical construals.)

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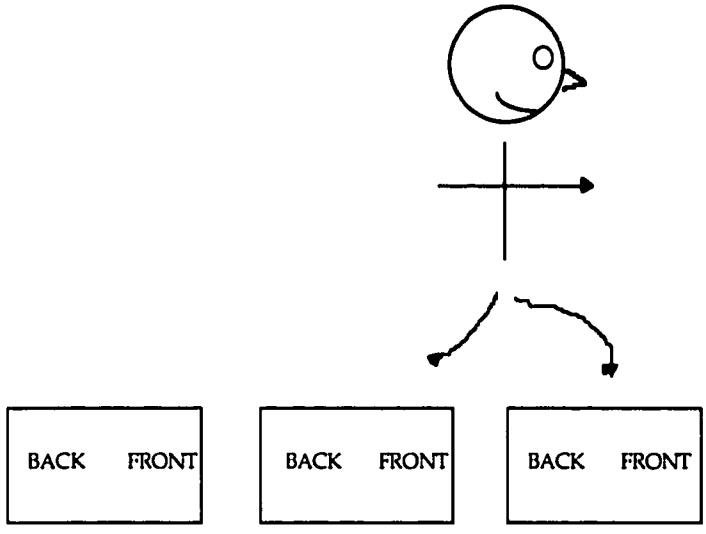


Diagram 5.2: "[Ori] is in front of Ramadan.... Baraxlu is behind Ramadan." (The squares represent months metaphorically construed as locations. The words BACK and FRONT written in the squares indicate the metaphorical orientation that Ego imposes on the months via the Ego-Aligned strategy.)

Summary

In this section we have seen data that involve Wolof speakers talking in abstract terms about how they conceive of temporal relations. The Ego-Opposed and Ego-Aligned strategies are both usable for talking in this way. The two strategies represent different ways of taking a perspective with respect to a temporal situation, and different people prefer different strategies. It is reasonable to assume that varying inter-speaker preferences in perspective-taking strategies result in linguistic variation.

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5.6. Conclusions.

In this chapter we have seen that speakers have various ways of construing situations of location and movement, and that these varying construals get mapped onto temporal concepts. An important parameter of this variation has to do with the point of view assumed by the conceptualizer. Emanatian's work shows clearly that adopted point of view can be a crucial aspect of the construal of temporal relations. Hill's work shows that in addition to the question of placement of point of view, there is the question of how spatial relations are construed from that point of view. He called attention to the contrasting conceptual strategies of Ego-Opposed and Ego-Aligned and how these are extended to temporal reference. Importantly, Hill also showed that there is substantial inter-speaker as well as crosslinguistic variation in how these strategies are employed.

Construal is to some extent a matter of (unconscious) individual choice. Within certain constraints, more than one construal — e.g., Ego-Opposed or Ego-Aligned — may be adequate to the task of thinking and talking about a given range of experience. The hypothesis that different people prefer different construals as a matter of habit accounts for certain kinds of linguistic variation: Since it is natural that not all members of a speech community all have the same habits, inter-speaker variation is to be expected (cf. Hanks 1996a, Hopper 1998).

It was useful to examine the issue of variation in the case of *kanam* because the restrictions on *kanam* are relatively clear cut. First of all, there are no 'earlier than' uses of *kanam*. I believe the reason for this is that there is no conventional association between the Word *kanam* and any cognitive device, such as the Moving Time metaphor or the Ego-Opposed strategy, that would motivate an 'earlier than' use. Thus there is no mode of construal that results in an 'earlier than' use of *kanam*. This a simple case of a limit to what can be motivated by choice of construal.

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The case of the deictically unanchored use in *ci kanam fajar* 'from dawn on' is more complex. As an exception to a well-established trend, this deictically unanchored use of *kanam* contrasts with the case of 'later than' *gannaaw* where there are tendencies, but these tendencies are not regular enough to motivate treating the observed variation as exceptional. Since the case of *kanam* is relatively clear cut, it has been possible to argue that the exceptional use is due to an exceptional shift in mode of construal including how a speaker takes up a fictive metaphorical point of view relative to a temporal sequence (cf. the discussion of example 10). This in turn motivates the hypothesis that differences in how people assume points of view, and other aspects of construal, can underlie linguistic differences across speakers. (And also presumably different construals entertained by the same speaker at different times involve similar phenomena.)

Thus, it is plausible that variation in what speakers are willing to accept as an independently established point of view accounts for the variation observed in how 'later than' *gannaaw* is used. It could be, for example, that positional terms in some contexts are valid RP's of 'later than' *gannaaw* for some speakers and not others. We saw some evidence for this in Section 4.5. Moreover, exactly the same kind of exceptional point-of-view shift that accounts for the *ci kanam fajar* 'from dawn on' case also accounts for the Hausa and Spanish exceptions to the generalization in Chapter 3 regarding the unmarked status of EARLIER=IN-FRONT and LATER=BEHIND expressions in many of the world's languages.

We now have a substantial understanding of the basic mechanisms according to which temporal metaphor works, and we have seen some of the interesting kinds of problems that can arise in its study. We are ready, then, to make a broad survey of the metaphors in Wolof that map spatial concepts onto temporal ones. This is the topic of Chapter 6.

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Notes.

[1] Emanatian's abbreviations are as follows (where they differ from mine). SG = Singular; SM = Subject Marker; PROG = Progressive; IND = Indicative

[2] A caveat is that I am not sure to what extent the sentences in Hill 1978 are claimed to represent ordinary language use outside of the interview context. It is possible that the status of Hill's data is more like that of the *metaconceptual* judgments I present for Wolof in Section 5.5.

[3] Glosses of Hausa words are from Bargery 1934.

[4] Hill's terms are *in tandem* for 'Ego Aligned' and *mirror image* for 'Ego Opposed'.

[5] The translation in double quotes is an approximation that I have provided.

[6] The speakers are df RT, df RK, and s G.

[7] Thus G's judgments in 10 are not attributable to possible priming effects that might have resulted from first talking about deictic categories like 'day after tomorrow'.

[8] The process just described resembles *blending* in the sense of Fauconnier and Turner (e.g. 1998). What is different is that in the process just described, the conceptualizer uses the Moving Time image to get to a certain point in his reasoning and then deactivates Moving Time once he has established the sequence of months. He then adds Moving Ego structure to the generic sequential structure. By contrast, a blend would involve combining Moving Time and Moving Ego into one complex metaphorical scenario. For a case of blending see section 6.7.2.

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6

Situations and concepts: an overview of spatial metaphors for temporal concepts in Wolof

6.1. Introduction.

This chapter is dedicated to a partial overview of the metaphors that Wolof speakers use for talking about temporal experience in terms of physical experiences of movement and location. The relationships between the Source-Domain and Target-Domain concepts in these metaphors are highly systematic, in ways that are often familiar from what we know about English. This systematicity and similarity is evidence that many such metaphorical expressions are motivated by types of experiences that are available to people regardless of language or culture, and are a matter of cognition and not just word meanings. Considerations that are specific to individual languages do, however, play a significant role in determining what metaphorical expressions a language has or does not have and how these expressions are used.

Investigating the range of metaphorical expressions in Wolof and the conceptual mappings that generalize over them will yield important insights into the question of what makes an experience a good grounding experience for motivating temporal metaphor. As in previous chapters, we will see that there are direct connections between experiences of motion/location and temporal experience that motivate the linguistic forms we are studying.

6.2. Temporal relations construed as static location.

In previous chapters we have seen quite a few examples in which temporal relations are talked about in terms of translational motion. Metaphorical construal of temporal relations in terms of static location also

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occurs. Since the notion of static location is relatively simple, an examination of concepts of static location and how they map onto temporal concepts provides an appropriate starting place for this chapter. I will argue that there are two kinds of metaphors of static temporal location: those that are Ego-centered, and those that are motivated independently of Ego's point of view. Thus we will see a third type of *Other-centered* metaphor in addition to Moving Time as instantiated by *fekk*, and FRONT/BACK Moving Time. The Ego-centered metaphor of static location is exemplified in 1a-b. A Source-Domain example is given in 1c.

The Wolof locative preposition *ci* in spatial uses does not code anything about the dimensionality or orientation of the figure or RP. That is, *ci* is neutral with respect to notions like containment or contiguity with a surface that are coded with prepositions like *in* and *on* (Bennett 1975, Herskovits 1986). Moreover, such notions of dimensionality are orthogonal to questions of deixis, as shown by the examples in 1, where 1a-b are deictic but 1d-e are nondeictic.

1) a. *...Ñungi* *ci* *tereet...*
1.PL:PRSNTTV LOCPREP trading.season
'We're in the trading season.'
[s L, Ba:91]

b. *... Ñungi* *ci* *senk-ëer.*
1.PL:PRSNTTV LOCPREP five-o'clock
"We're at five o'clock."
'It's five o'clock.'
[s T, Xi:95]

English has expressions that are similar to 1a. Compare *We are in summer.* A spatial example is given in 1c.

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1) c. *Ñungi* *ci* *Bawol.*
1.PL:PRSNTTV LOCPREP Baol
'We are in Baol.' (Baol is a region in Senegal.)

d. *Tàngoon* *na* *ci* *midi...*
hot:PAST PERF.3 LOCPREP noon
'It was hot at noon...'
[AK, 031199]

e. *Tàngoon* *na* *ci* *októobar.*
hot:PAST PERF.3 LOCPREP October
'It was hot in October.'
[AK, 01.20.00]

Here is a brief overview of the metaphor we are investigating, which we can call WHEN AS WHERE. In the Source-Domain situation there is simply a reference place at which a figure is located. The figure and the RP each map onto a time, and the relation of co-location maps onto (typically partial) simultaneity. The conceptualizer's understanding of when the RP occurs is not depicted by this metaphor. The metaphor itself is neutral as to the kind (or degree) of containment that is involved in the grounding scenario. The metaphor can be represented schematically as in Diagram 6.1a, which is intended to be neutral as to containment: in Diagram 6.1a, the approximate location of the RP is noted by the letters *RP* in square brackets, but nothing in the diagram actually stands for the RP. Diagrams 6.1b-d represent the Source-Domain topological relations between figure and RP that potentially are mapped: *figure contained in RP* ([examples from Target Domain] example 1a), *figure located at RP with no containment* (example 5), *figure contains RP* (example 1d). In the drawings, where appropriate, figures are drawn with darker lines.

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X [Figure]

[R P]

Diagram 6.1a: WHEN AS WHERE (neutral as to containment).

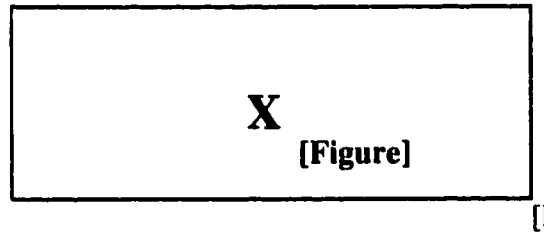


Diagram 6.1b: WHEN AS WHERE (figure contained in RP) cf. example 1a.

X [Figure]

• [RP]

Diagram 6.1c: WHEN AS WHERE (no containment) cf. example 5.

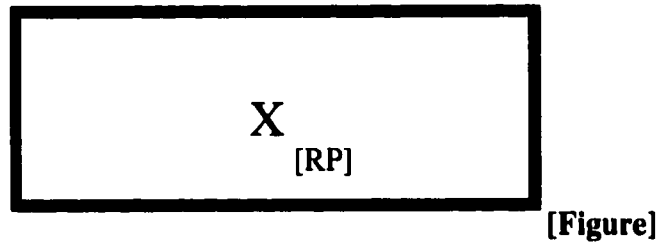


Diagram 6.1d: WHEN AS WHERE (figure contains RP) cf. example 1d.

The linguistic resources of Wolof for talking about static location are fairly productively used for talking metaphorically about temporal relations.

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Example 2a below is conceptually very much like 1a, but 2a uses the verb *nekk* 'be located' and the proximal relativizer *bii* 'this which'. A physical-location example of *nekk* is given in 2b.

2) a. *Àjjuma bii ñu nekk*
Friday REL.PROX 1.PL.SUBJ be.located
"this Friday which we're located in."
'today, Friday.' (Said on the radio obituaries.)
[att.] [An:51]

b. *Aamadu Ndar la nekk.*
Amadou St.Louis NONSUBJ.FOC.3 be.located
'Amadou is in St. Louis'
[Munro and Gaye 1991 under *nekk*]

In order to appreciate how metaphors of static temporal location work, it will be useful to briefly discuss some facts about how temporal experience is coded in language. There are two major grammatical categories with which languages code temporal experience: tense and aspect. Aspect is characterized by Comrie (1985:6) in the following way, "The internal temporal contour of a situation [i.e. process, event, or state] provides the conceptual basis for the notion of aspect, which refers to the grammaticalization of expression of internal temporal constituency." We will be concerned with the conceptual phenomena of aspect and tense and how they are coded in metaphors involving primarily lexical concepts. Comrie's characterizations of tense and aspect suggest the relevance of spatial metaphors.

Tense, according to Comrie (1985:9), is "...grammaticalized expression of location in time." Or, to put it non-metaphorically, tense is concerned with when an event occurs relative to a RP. (I am using *event* as a cover-term for events and states.) *Tense* is a deictic category involving the notions past, present, and future. It will be convenient for our purposes to have a deixis-

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neutral term for talking about when an event occurs relative to a RP; that is, a term that covers both *tense* and *sequencing* (in the sense of Traugott 1975). I will refer to such temporal concepts as *WHEN-relations*. Examples of WHEN-relations are BEFORE, DURING, and AFTER.

Metaphors of static location predicate a relation of simultaneity between some part of an event and a RP (cf. Haspelmath 1997). For example the metaphor in 1d says that when noon occurred, heat was also occurring. The conceptualizer can infer the that the time of being hot started before noon and ended after noon, but this is not coded by the construction. Many Wolof metaphorical expressions of static location are like 1d in not being specific about how the temporal profiles of figure and RP are aligned. (The term *temporal profile* refers to the duration associated with an event. See Langacker 1987.)

There are two variants of WHEN AS WHERE, Ego-centered and Other-centered. The mappings are given below. The *simultaneity* in the mappings is typically partial. I do not attempt to state a single mapping for all WHEN AS WHERE cases because I am reluctant to posit a single ontological category that includes both *"now"* and *the temporal component of an event or state.*

Table 6.1a: Mapping for Ego-centered WHEN AS WHERE. *E.g.* ...Ñungi ci senk ëer. 'We are at five o'clock.' (example 1b).

SOURCE		TARGET
A physical entity.	→	"Now."
A place.	→	A time.
Being at a place	→	Being simultaneous with a time.

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Table 6.1b: Mapping for Other-centered WHEN AS WHERE. *E.g.* Tàngoon na ci midi.... *'It was hot at noon' (example 1d).*

SOURCE		TARGET
A physical entity.	→	The temporal component of an event or state.
A place.	→	A time.
Being at a place	→	Occurring/obtaining simultaneously with a time.

Ego-centered WHEN AS WHERE has a figure-ground alignment that is reversed with respect to Ego-centered Moving Time, which construes "now" as "here," as in 2c below or an English example like *Summer's here.*

2) c. *Noor ñów na.*
dry.season come PERF
'The dry season has come.' 'The dry season is here.'

The notions *figure* and *ground* (Talmy 1978) are equivalent to figure and RP. The idea of figure-ground alignment is that perceived scenes and their linguistic encodings are virtually always structured in such a way that there is a figural element whose status is understood with respect to a ground element, as in all of the example sentences discussed so far. The denotation of a phrase is said to have figure-ground alignment that is *reversed* with respect to that of another phrase if the figure of the first phrase corresponds to the ground of the second phrase (and the *ground* of the first phrase corresponds to the *figure* of the second). For example, the sentence *The house is near the bicycle* has reversed figure-ground alignment with respect to *The bicycle is near the house* (Talmy 1978).

Noor ñów na 'The dry season is here' (=2c above) and *Ñungi ci tereet* 'We are in trading season' (=1a) have reversed figure-ground alignment

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relative to each other in the following sense. In 2c, a temporal cycle-member (the dry season) metaphorically corresponds to a figural object. The ground with respect to which the location of this object is determined is the location of the speech act, which maps onto "now." In 1a, "now" corresponds to a figural object whose location is determined relative to a certain place, and this place maps onto a temporal cycle-member (*tereet*).

As suggested by Diagrams 6.1b-d, WHEN AS WHERE expressions encode a variety of relations between the temporal profile of the figure and that of the RP. These relations are typically not given explicit linguistic representation in Wolof. The figure may instantiate a variety of aspectual types. In all cases, the metaphor codes simultaneity, typically partial, between the figure and RP. Let us survey the different kinds of temporal phenomena that WHEN AS WHERE expressions can refer to.

First we note the case where the figure is Ego's "now," and the time of the RP starts before, and ends after, the time of the figure, as in 1a and 2a. We can think of this metaphorically as a situation in which the RP is a region that completely contains the figure. A figure which is not Ego's "now" may also have this relationship of "*Inclusion*" in the RP, as in 3a, in which figure and RP are both positional terms.

3) a. *diis-ëer* *ci* *guddi*
ten-o'clock LOCPREP night
'ten o'clock at night' (The [time of the] figure is "*Included*" in the [time of the] RP.)
[att.] [DFS, A]

Example 3b below has complexities we will deal with later, but for now let us focus on the final phrase (underlined) *ci biir noor* 'inside the dry season'. In this phrase, the Inclusion of the figure in the RP is explicitly coded

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as metaphorical containment. This is the only case in this section in which a relationship of Inclusion is explicitly coded linguistically. As in 3a, the figure and RP are both positional terms.

3) b. ... *Fim* *ne*
where:3.SUBJ be.located
ni *mungee* *génn nawet* *bi* *dafay*
like.this 3:PRSNTTV:IMPF exit rainy.season the SFOC.3:IMPF
gën *di* *ñów* *nag* *ci* *biir*[1] *noor*.
more IMPF come then LOCPREP stomach dry.season
"Where it is like this, it [Ramadan] is exiting the rainy season; it's coming more inside the dry season now."
'Each time Ramadan occurs it is farther from the rainy season and farther inside the dry season.'
[s XW, 92697]

In example 4 below, Ego's "now" is metaphorically located relative to a positional term as in 1a and 2a, but in the case of 4 the RP is of considerably less duration.

4) ... *Ñungi* *ci* *senk-ëer.*
1.PL:PRSNTTV LOCPREP five-o'clock
"We're at five o'clock."
'It's five o'clock.'
[s T, Xi:95]

In 5 below as in 4 above, the RP is a time of day that has minimal duration. In 5 the figure is a more-or-less punctual event construed perfectively.

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5) *Móodu yeewu na ca fajar ....*
Moodu awaken PERF.3 LOCPREP.DIST dawn
'Moodu awoke at dawn.'
[Cissé 1994:18]

In the next example the speaker talks about how two cycles are aligned — the growth cycle of guinea corn and the yearly cycle of seasons. I will talk about the aspectual structure of the growth cycle of a plant in terms of the aspectual model of Chang, Gildea, and Narayanan (1998), in which events are understood as being composed of stages and the transitions between them. The growth cycle of an agricultural plant includes germination, growth, ripening, harvest, and death. In 6, a particular point in the growth cycle of guinea corn (figure) is said to occur at a time when a season called *lolli* (RP) is also occurring. The aspectual semantics of 6 are complex but the WHEN AS WHERE metaphor functions essentially the same way as in other examples -- co-location maps onto (partial) simultaneity. In 6 it is inferable that the RP (*lolli*) Includes the figure. The figure (achieving ripeness) is a perfective event, marked as imperfective because it is construed as a regular occurrence. The RP is a positional term. An English sentence analogous to 6 is *Corn gets ripe in the fall.*

6) a. *... Dugub, ci lolli lay ñor.*
guinea.corn LOCPREP lolli NONSUBJ.FOC.3:IMPF be.ripe
'Guinea corn, it gets ripe in *lolli*.' (*Lolli* is a season.)
[s XW, Ba:62]

Finally, we saw a configuration in 1d in which the conceptualizer can infer that the figure begins to obtain before the RP occurs and continues to obtain after the

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RP has ceased — i.e., the time of the figure Includes the time of the RP. The figure is a state and the RP is a time of day.

To summarize, we have identified a metaphor, WHEN AS WHERE, that depicts (partial) simultaneity in terms of co-location. There are two versions of the metaphor — Ego-centered and Other-centered — that differ as to whether or not the figure is Ego's "now." WHEN AS WHERE can code a variety of aspectual notions, and a variety of relations of comparative duration between the temporal profile of the figure and that of the RP. These relations of comparative duration are generally not explicitly represented linguistically.

6.2.1. The experiential grounding of WHEN AS WHERE.

Lakoff (1993) and Lakoff and Johnson (1999) assume that construals of times (other than "now") as places or as having physical extent are in general due to a metaphor called *The Moving Observer* or *Time's Landscape*. The term *Moving Observer* is equivalent to *Moving Ego*. According to Lakoff and Johnson (1999:146), "Since time is a path on the ground the observer moves over, it has extension and can be measured." Lakoff and Johnson assume that construals of times as places (other than "here") are motivated by a mapping that includes the metaphorical forward movement of Ego in time. I will offer a different account that allows for a better understanding of the linguistic data.

It is plausible that WHEN AS WHERE has a motivation that is distinct from Moving Ego because, as we have seen, WHEN AS WHERE expressions do not necessarily involve either Ego or movement. I propose that WHEN AS WHERE is motivated by an experiential correlation between times when events occur and places where they occur. (I will speak of *events occurring* to refer to events occurring or states obtaining.) Evidence for this correlation comes from expressions that employ *place* to metonymically refer to occurrences of

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events. The examples in 7 below exemplify the metonymy for both Wolof and English.

7) a. *Fépp foo ko hoo rekk, mu huyu la.*
everywhere where.you 3.OBJ call only 3.SUBJ answer 2.OBJ
"Everywhere where you call him/her/it, he/she/it answers you."
'Wherever/whenever you call ....'
(*Ko* 'third person object' refers to God.)
[s XW, 926]

b. *Foo ko fekk mu ne-xulaas.*
where.you 3.OBJ become.co-located.with 3.SUBJ be.drunk.as.a.skunk
"Wher[ever] you encountered him he was drunk as a skunk."
'He was always drunk as a skunk.'
[Cissé 1994:36]

In 7a there is an experiential correlation between the place in which Ego finds herself calling on God and the "now" she experiences at that place. In 7b the relevant correlation is between the place at which the person is found and the time when he is found.

If someone is drunk *wherever* you see him (as in 7b), he is drunk *whenever* you see him, and vice versa — there is a salient and regular correlation in experience between the *where* and the *when*. In fact, place, event, and time are three tightly correlated aspects of a single experience. For example, what 7b above reports on is a three-way correlation between instances of drunkenness (a state), places and times. The concept of physical location is well demarcated by sensory experience and thus is a good trigger for metonymy as well as Source-Domain concept for metaphor.

Here are the grounding and Target-Domain scenarios for WHEN AS WHERE.

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Grounding scenario for WHEN AS WHERE

An event happens at a place when it happens. (I.e., there is a place where the event happens and a time when it happens.)

Target-Domain scenario of WHEN AS WHERE

An event happens when it happens. (I.e., there is a time when the event happens.)

The following examples show that Wolof makes use of the *place for occasion* metonymy to a greater extent than English does. In example 8, the place where smoking occurs stands for the fact of smoking occurring.

8) a. *Musuloo gis fu ma tux-e.*
have.ever.experience:NEG.2 see where 1.SUBJ smoke:VAL
"You have never seen where I smoke at."
'You have never seen me smoke anywhere.' 'You have never seen me smoke.'
[AK, Hai:33]

And in the next example, the speaker says "Let there not be a place where talk exists" to mean 'Don't quarrel'. ('Talk' is metonymic for 'quarrel' here.) In these examples, the speaker makes use of the notion that when an event occurs, it occurs at a place. (Cf. Lakoff 1987 on *there* constructions and the idea that "to be is to be located.")

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b. *Neeleen-rugg, wettali Ndeela te bu*
stay.put:IMPR.PL keep.company Ndeela and NEG.HORT
fu wax am.
where talk have
"Stay put, keep Ndeela company and may talk not exist anywhere."
'Stay put, keep Ndeela company and don't quarrel.'
[Jeŋ 1992:32]

Example (b) above exemplifies the motivation for WHEN AS WHERE because the speaker is using the locative pronoun *fu* 'where' to stand for *instances* of talking. The speaker is thus using a metonymy whereby places where talking occurs stand for instances of talking.

Below are further examples of the metonymy in which place of occurrence stands for instance of occurrence. The examples show how the metonymy could play a role in motivating the WHEN AS WHERE metaphor in which a place maps onto a time. In the (a) example below, *fa* is the locational complement of the verb *fekk* 'become co-located with' and indicates the location at which the mover argument, the rain, "finds" the goal argument denoted by *ko* 'third person object'.

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9) a. *Fa mu tooge di fàttaleku dëkkam la*
where 3.SUBJ sit:VAL AUX remember home:GEN NONSUBJ.FOC.3
ko taw bi fekk.
3.OBJ rain the become.co-located.with
"Where she sat thinking of her home is where the rain became co-located with her."
'The rain found her at the spot where she sat thinking about her home.' 'It began to rain on her where/as she sat thinking of her home.'
[AK, 021899]

Example (a) says that someone was sitting somewhere thinking about her home, that the rain started while she was sitting there, and that it rained there. *Fa* has spatial reference in this example because it denotes a place that is relevant to the meaning of the utterance as a whole, which has to do with rain becoming co-located with a person.

Notice that the preposed locative constituent — 'where she was sitting thinking of her home' — in (b) is the same as the one in (a).

9) b. *Fa mu tooge di fàttaleku dëkkam la*
where 3.SUBJ sit:VAL AUX remember home:GEN NONSUBJ.FOC.3
taw bi tàmbale.
rain the start
"Where she was sitting thinking of her home is where the rain started."
'As she was sitting thinking of her home, the rain started.' 'It was at a moment when she was sitting thinking of her home that the rain started.'
[AK, 021899]

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In 9b — as opposed to 9a — the locational semantics of *fa* are not relevant to the event (the starting of the rain) denoted by the main clause, so a spatial reading is not available. The temporal component of a phrase like *fa mu tooge* 'where she sat' is always present to some degree as a part of the setting, and in the case of (b) the only available reading is temporal (cf. Traugott 1985b etc). There is however metonymy involved in 9b because of the experiential correlation between the locational and temporal components of the setting in which the event happens.

The metonymic character of the above examples shows that the experiential correlation between place and time is a plausible motivation for temporal uses of *fi/fa* 'where' phrases. The following example shows that metonymy is not always available in such utterances. In 10 below the speaker is discussing a calendar. In this context there is no relevant metonymic relationship between where the moon appears and when it appears. The example is thus a clear case of the WHEN AS WHERE metaphor.

10) *... weer wi fim teroo ak fim deeee.*
moon the where:3.SUBJ appear:VAL and where:3.SUBJ die:VAL
"the moon, where it appears and where it dies."
'when the moon appears and when it disappears.'
(The speaker is saying that there is a calendar that gives this information on the moon/month.)
[s V tape]

In this section we have seen that a correlation in experience between events and the places where they happen is a plausible motivation for WHEN AS WHERE. Moreover, since WHEN-AS-WHERE expressions occur in contexts in which the correlational basis is not present, WHEN AS WHERE is a metaphor and not just a metonymy.

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6.2.2. *Event structure metaphors.*

As we study temporal metaphors it is important to be aware of a different kind of metaphor that is grounded in the three-way correlation between place, event, and time. This kind of metaphor is called Event Structure (cf. Grady 1997a, Lakoff 1993, Lakoff and Johnson 1999, Lakoff and Turner 1989, Taub 1993, 1998). The reason for discussing Event Structure metaphors at this point is to emphasize the salience of the correlations on which both the Event Structure and WHEN AS WHERE metaphors are based. Event structure metaphors have been extensively investigated in English by (among others) Lakoff (1993) and Lakoff and Johnson (1980, 1999) and shown to play a pervasive role in the English speaker's understanding of events, causes, changes, states, actions, and purposes. Taub (1998) has found that Event Structure metaphors are pervasive in Uighur. Yu (1998) has found them extensively in Mandarin, and in fact they have appeared in every language investigated so far. There are two kinds[2] of Event Structure metaphor, one that construes events in terms of locations and another that construes them in terms of objects (Lakoff 1993, Lakoff and Johnson 1999:179). Before we see the Wolof examples, let us look briefly at some of the mappings that concern us most, with English examples (see Lakoff and Johnson 1999:179ff).

Locations.	→ States	I'm *in* Love. She's *close to* insanity.
Movements.	→ Changes	I *went* crazy.
Self-propelled movements.	→ Actions	I worked my *way through* the exam.
Destinations.	→ Purposes	We're *a long way from* actually fixing this sink.
Paths (to destinations).	→ Means	We could have fixed it quicker, but we *went the long way around.*

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The type of Event Structure metaphor we are most interested in at this point is one that construes events/states/processes as locations (e.g., *She was in trouble, She was at peace*). These examples involve states and the metaphor is called STATES AS LOCATIONS (Lakoff 1993, Lakoff and Johnson 1980, 1999). Examples of STATES AS LOCATIONS from Wolof are given below.

11) a. *Mungi ci jàmm.*
3:PRSNTTV LOCPREP peace
"She's at peace."
'She's doing fine.'
[AK, 5699]

b. *Mungi ci naqar*
3:PRSNTTV LOCPREP sorrow
"She's in a state of sadness/pain."
'She's suffering.'
[AK, 5699]

The metaphor we are concerned with can be called PROCESSES AS LOCATIONS, where *processes* refers to non-punctual events, and states. Another subtype of PROCESSES AS LOCATIONS is ACTIVITIES AS LOCATIONS (Lakoff and Johnson 1999, Taub 1993, 1995). An English example would be *I was in the middle of tying my shoe when a monkey stole my wallet.* ACTIVITIES AS LOCATIONS is exemplified for Wolof below.

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12) a. *Ci* *loo* *nekk?*
LOCPREP what.you be.located
"At what are you located?"
'What are you doing?'
[att.] [s XB, An:147]

b. *Waxtu wii daaw, ñuŋ* *ci* *biir* *liggéey bi.*
hour this last.year 1.PL:PRSNTTV LOCPREP stomach work the
"At this time last year we were inside the work."
'At this time last year we were involved in the work.'
[s, An:26]

c. *Maaŋ* *ko* *fekk* *mu* *nekk* *ci*
1:PRSNTTV 3.OBJ become.co-located 3.SUBJ be.located LOCPREP
diggu *waxtaan* *wu* *neex.*
middle:PD conversation REL be.pleasant
"I found her located in the middle of a nice conversation."
'I found her involved in a nice conversation.'
[AK, 5699]

One reason this metaphor is important crosslinguistically is that it motivates the form in which progressive aspect is coded in many languages. According to Traugott (1978:388), "There is overwhelming evidence from a large number of languages that the underlying spatial feature of progressives is of the type *be at* or *be in*." Heine, Claudi, and Hünnemeyer (1991a:36) state the constructions such as "X is at/in/on Y" are "the major source of progressive forms." Bybee, Perkins, and Pagliuca (1994:174) also report that the sources of progressives are overwhelmingly locative forms, meaning 'to be at or in an activity'.

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Locative marking is also of major importance crosslinguistically for coding the temporal relationship between a event and the time when it occurs. According to Haspelmath (1997:102), if the RP in a temporal expression is coded by a temporal noun (i.e., a noun denoting a canonical time period or a temporal concept like 'time'), the temporal relationship is marked by a locative morpheme in the overwhelming majority of the languages he investigated.[3] Examples of this are *Corn gets ripe in the fall*, and *Harry awoke at dawn.*

Thus, progressive aspect and WHEN-relations tend strongly to be coded in the same way in the world's languages, as "X (...) at/in/on Y." It also seems to be the case that the progressive and WHEN-relation tendencies are not separate. Rather, it is likely that individual languages tend to code both progressive aspect and WHEN-relations with locative forms. Although this hypothesis has not been systematically investigated as far as I know, I was able to find some support for it. In most of the cases that I cite here, the data on the WHEN-relation is from Haspelmath 1997 and the data on the progressive is from other sources. I found that the following languages mark both WHEN-relations and the progressive with locative morphemes:

French (Haspelmath 1997:113, Traugott 1978:389)
Georgian (Haspelmath 1997:114, Comrie 1976:100)
German (Haspelmath 1997:116; a nonstandard German locational progressive is cited in Heine, Claudi, and Hünnemeyer 1991a:254)
Italian (Haspelmath 1997:111; Comrie 1976:102)
Mandarin Chinese (Haspelmath 1997:117, Comrie 1976:100-101)
Spanish (Heine et al. 1993)
Vai (Heine et al. 1993:126)
Yoruba (Comrie 1976:101)
Welsh (Haspelmath 1997:109, Traugott 1978:389).

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To summarize, these data support the hypothesis that a three-way correlation between place, event, and time (as in *'a time when'* something happens) is salient in human experience as a grounding for conceptual metaphors. There are two quite distinct metaphors involved: WHEN AS WHERE and ACTIVITIES AS LOCATIONS. As we have seen, there are actually two versions of WHEN AS WHERE. Other-centered WHEN AS WHERE offers a direct motivation for the data in which temporal relations are referred to by means of static locative expressions like *It rained in the night.* This sort of direct motivation is desirable because it makes clear predictions about the data. For example it predicts that metaphors of static temporal location do not have any particular tendency to involve a human participant or be deictically anchored.

We are already somewhat familiar from previous chapters with metaphors in Wolof that map translational motion onto temporal experience — Moving Ego and Moving Time. We will now look at these metaphors in more detail.

6.3. Ego-centered motion metaphors.

A discussion of Ego-centered motion metaphors immediately involves the claim of Lakoff (1993) and Lakoff and Johnson (1999) that Moving Ego and Moving Time have reversed figure-ground alignment with respect to each other. Chapter 3 contains evidence that the claim is not correct regarding FRONT/BACK Moving Time: Moving Ego but not FRONT/BACK Moving Time involves relative motion between figure and RP. Since the two metaphors involve different types of reference frame, they cannot be figure-ground reversals of each other. It is possible, however, to talk about a reversal in figure-ground alignment vis à vis Moving Ego and Ego-centered Moving Time. Nonetheless, even here we have to pay close attention to the semantics of particular words and phrases.

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We will proceed by looking at various lexemes in Wolof and examining how their senses interact with the Ego-centered motion metaphors. We will again see similarities between temporal and Event Structure metaphors that suggest that the two types of metaphor should not be studied in isolation from each other. In most respects, Wolof metaphorical mappings are like English ones and thus may be motivated by universal aspects of human experience. There are also interesting cases in which Wolof lexicon is involved in metaphorical elaborations that are not found in English.

6.3.1. Symmetrical figure and RP roles.

The verbs included in this subsection are *jege* 'be/get near', *sore* 'be/get far' and *jub* 'approach'. The reason I have grouped these verbs together is that their senses involve a symmetrical relation between a figure and a RP. For example, in motion/location uses, if A is far from B, then B is also far from A, and either A or B could be moving or stationary. The relevant inferential structure is preserved in the metaphorical mappings. Examples of Source-Domain uses of *jege* 'be/get near' and *sore* 'be/get far' are given in 1 below. *Jege* and *sore* are ambiguous between stative ('be near/far') and inchoative meanings ('get near/far') (cf. section 7.5; Jackendoff 1990, Talmy 1985:88-9). This contrast is exemplified for *sore* in 1b-c.

1) a. *Fi mu dëkk baax na, jege na lekkoolam.*
where 3.SUBJ reside good PERF.3 be.close PERF.3 school:GEN
'She lives in a good place; it's close to her school.'
[Fal, Santos, and Doneux 1990 under *jege*]

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b. *Xale yi dañuy teel yeewu,*
'The children get up early';
seen lekkool dafa sore.
their school SFOC.3 be.far
'their school is far.'
[Fal, Santos, and Doneux 1990 under *sore*]

c. *Sore nga?*
be.far PERF.3
"You got far?"
'Did you go far?' (*Sore* can also have a stative meaning in the perfect conjugation, as *jege* does in 1a.)
[att.] [Z, Lu 157]

There are uses of *jege* 'be/get near' that are neutral between Moving Ego and Moving Time, such as the one exemplified below.

2) a. *Waxtu wi dafa jege.*
hour the SFOC.3 be.close
'The time is near'
[AK, Hai:38]

The same is true of *sore* 'be far'.

b. *Dimaas dafa sore.*
Sunday SFOC.3 be. far.
'Sunday is far.' [I.e., 'Sunday is a long time from now.']
[att.] [s, An:65]

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There are also Moving Ego expressions with *jege*. In 2d below, *jege* appears with the ventive suffix *-si*. In motion/location uses, *-si* indicates that the subject of the verb comes to the location of the speech act to do whatever the verb denotes, as in 2c. There are two possible analyses of the semantic structure of 2d. One is that *-si* in combination with the presentative conjugation *angi* codes progress toward the completion of an event; 'be/get close' becomes 'getting close'. I.e., the event is metaphorically "approaching" completion. This would involve a displaced viewpoint as in an English expression like *She is coming to like classical music*. (This is a special aspectual use of *-si* that will be discussed more fully in section 7.6.1.) The other possible analysis is that *-si* indexes metaphorical movement towards a shifted deictic center situated at the time of the expected future event. (Both of these nuances of the notion COME are discussed in Emanatian 1992).

2) c. *Jàng-si naa*
study-VEN PERF.1
'I have come to study.'
[Swigart n.d.:13]

d. *Maangi jege-si suma ngénte.*
1:PRSNTTV be.close-VEN my birth.celebration
'I'm getting close to my birth celebration.' [I.e., the celebration of the birth of the speaker's child.]

Jege also appears in the Moving Time metaphor:

e. *...Weerukoor mungi bëgg a jege.*
Ramadan 3:PRSNTTV want MBA be.close
"...Ramadan is about to be close."
'It's almost Ramadan.' [s C, 101597]

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2) f. *Timis jege-si na.*
dusk be.close-VEN PERF.3
"Dusk has become close."
'It's just about dusk.'
[s XW, Ba:67]

Semantically similar to *jege* 'be close' in temporal uses is *jub* 'approach'. *Jub* in the example below is ambiguous between a Moving Ego and a Moving Time interpretation. The ambiguity is made possible by the fact that the form *ma* is either a subject or an object pronoun.

3) a. *Bu ma weesoo ngénte li ma jub,*
when 1.SUBJ go.beyond:ANT birth.celebration REL 1 approach
dinaa toppatoo sa liggéey.
FUT.1 attend.to your work
"When I get beyond the birth celebration (that is approaching me/that I am approaching), I'll attend to your business."
'When this birth celebration is over with, I'll attend to your business.'

Next is a Moving Ego example.

b. *Maangi jub-si sama ngénte li.*
1:PRSNTTV approach-VEN my birth.celebration the
"I'm approaching my birth celebration."

Jub also appears in the Moving Time metaphor with *-si*.

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3) c. *Koor* *jub-si* *na*
Ramadan approach-VEN PERF.3
'It's almost Ramadaan.'
[df TR, Ba:128]

When the suffix *-si* appears with *jege* or *jub* in the perfect conjugation, as in examples 2f and 3c, *-si* is best analyzed as having a Moving Time version of its ventive meaning, in which the subject metaphorically comes to the location of the speech act to do the action denoted by the verb. In these cases the place of the speech act maps according to Moving Time onto the time of the speech act. Thus, for example, the interpretation of 2f is that dusk has metaphorically "come close" to the location of the speech act — i.e., is about to occur. The locative and aspectual uses of *-si* will be discussed further in section 7.6.1.

To summarize, we have just seen three verbs, *jege* 'be/get close', *sore* 'be/get far', and *jub* 'approach' that depict a symmetrical relationship between a figure and a RP. *Jege* and *jub* appear in both Moving Ego and Moving Time expressions, and they both take the ventive suffix *-si*. Setting aside questions regarding *-si* and of stative/inchoative ambiguity, the similarity to English uses of *be near/close, be far,* and *approach* is striking. It is appropriate to say Moving Ego and Moving Time expressions with these verbs are figure-ground reversals of each other (Cf. Lakoff 1993, Lakoff and Johnson 1999). The interpretation of an expression with one of these verbs as Moving Ego or Moving Time depends simply on whether it is Ego or a time that is construed as moving. These verbs are amenable to either interpretation because of the symmetrical nature of the relationship that they code between their figure and RP arguments.

In cases in which neither argument is explicitly coded as moving, an expression with one of these verbs can be ambiguous between a Moving Ego and a Moving Time interpretation. In cases such as those in 2 (e.g., *Waxtu wi*

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dafa jege 'The time is near'), it is necessary to assume that a movement metaphor is involved because otherwise it would not be possible to infer that the time in question will occur soon: Given that the available metaphors map an arrival onto the occurrence of a time, this inference is accessible only in a movement scenario in which one of the entities is expected to arrive at the other's location.

6.3.2. *The body-based* FRONT/BACK *schema*

In contrast to the symmetrical expressions we just studied, expressions in Wolof involving the body-based FRONT/BACK schema inherently involve an asymmetrical relationship between the RP and figure. For example, Ramadan may be construed as being *ci kanam* 'ahead' of Ego, but there is no corresponding expressions that locates Ego on the front/back axis with respect to Ramadan. I.e., Ego is neither AHEAD OF nor BEHIND Ramadan. Expressions which involve the body-based FRONT/BACK schema in Wolof are Moving Ego expressions of the sort we discussed in Chapter 2. A couple of examples are repeated here for the sake of completeness. (In 4b *ñów* 'come' refers to physical rather than metaphorical motion.)

4) a. *Weerukoor ci* *kanam* *la.*
Ramadan LOCPREP front NONSUBJ.FOC.3
'Ramadan is [still] ahead.' 'Ramadan is still a ways off.' (I.e., Ramadan is still in the future.)

b. *Ci* *gannaaw* *la* *ñów.*
LOCPREP back NONSUBJ.FOC.3 come
"At back she came."
'She came a while ago.'

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This is a simple metaphorical locative type. It simply codes the WHEN-relation of a point or period of time with respect to the present.

6.3.3. Asymmetrical figure and RP roles with verbs of motion.

6.3.3.1. Dem *'go' and* jëm *'be heading for'.*

In temporal expressions involving verbs of motion, the coordinates relative to which temporal location is understood are not necessarily supplied by the front/back asymmetry of Ego's body, although expressions with verbs of motion are compatible with this orientational strategy. In the next example, the front/back orientation is elaborated with the verb *dem* 'go'. *Dem*, like English *go*, is semantically general and can be used in deictically neutral contexts but not in contexts of motion toward the deictic center. In the following example, the speaker uses the Moving Ego metaphor to explain the notions of past, present, and future.

5) a. *Li ci gannaaw, xam nga paase nañ ko.*
REL LOCPREP back know PERF.2 go.beyond PERF.1.PL 3.OBJ
Léegi ñungi dem ci kanam.
now 1.PL:PRSNTTV go LOCPREP front
"That which is in back, you know we've passed it. Now we're going ahead." (The speaker is explaining his metaphorical orientation to temporal experience, with the past behind him and the future in front, in which he is metaphorically moving forward.)
[s L, Ba:109]

The following data exemplifies *dem* in a smaller time scale, and also exemplifies the equivalence of *dem* 'go' and one use of *toog* 'sit' in this context.

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5) b. *Boo*[4] *toogee... be* *gisaatuloo* *jant bi*

if.you sit:ANT to.the.point.of see:again:NEG.2 sun the

mën ngaa julli. Waaye nag léegi dangaa dem itam

be.able PERF.2:MBA pray but then now SFOC.2:? go also

be *toog gisaatuloo* *jant bi....*

to.the.point.of sit see:again:NEG.2 sun the

"If you sit until you don't see the sun any more you can pray. But now you go to the point of sitting and you don't see the sun..."

'When the sun sets, you can pray. But sometimes when you are there and the sun sets....'

(*Toog* 'sit' in this example denotes something like 'existing'. Where L says in the second sentence "go to the point of sitting and you don't see the sun," the English speaker would take it for granted that the experiencer exists and would not mention an equivalent of "sitting." L uses *léegi* 'now' in the second sentence to establish the described situation as contrasting with the first sentence. He does not mean "now at the time of the speech act." He is saying that at certain times of year, when the sun sets, it's time to pray; but at other times of the year even after the sun sets it's not time to pray yet.)

[s L, Ba:105]

The evidence with *dem* shows that the Moving Ego metaphor can be used to talk about temporal change without any specific deictic or discourse anchoring. However, what the *dem* predications refer to is always Ego's subjective experience and thus a decentered "here and now" is involved. It is sometimes assumed in the literature that a word meaning GO involves a component of goal-directedness. However, example 5b above in which *dem* is equivalent to *toog* 'sit', as well as example 5c below, show that goal-directedness is not necessarily involved in *dem* predications.

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5) c. ... *Yow soo* *demee* *ba* *egg* *si* *bés boobu,*
you if.you go:ANT to.the.point.of arrive LOCPREP day that
dinga *xam.*
FUT.2 know
"You, if you go to the point of arriving at that day, you'll know."
'When you get to that day, you'll know.' [I.e., 'when that day comes.']
(The day in question was the topic of the conversation at that point.)
[df RK, Ba: 139]

The goal of motion (RP) of *dem* may be an event rather than a time:

d. *Xanaa* *nga* *dem* *ba* *liggéey* *bi* *jeex* *sa*
evidently 2.SUBJ go to.the.point.of work the be.finished your
njaatige *may* *la* *diir...* *lu* *war* *a* *mat*
boss give 2.OBJ time.period REL should MBA amount.to
ñaari *semen.*
two:PD week.
"You go to the point of the work being finished and your boss gives you a period of time that should amount to two weeks."
'You work until the work is finished, your boss gives you a period of time ... about two weeks....' (The boss allows you to travel for a certain period of time so you can go and visit your family.)
[s XW, An:87]

Example (d) involves an activity (work) that has an inherent completion point. The 'going' involved has to do with the activity as well as temporal location. Thus (d) has much in common with Event Structure metaphors. At the same time, (d)'s similarity with (c) suggests that (d) is a Moving Ego expression.

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Before looking at an Event Structure metaphor that is relevant to the analysis of Moving Ego, let us look at how the word *jëm* 'be heading for' interacts with Moving Ego. *Jëm* is used in physical motion contexts in which the goal of motion is salient. As in 6 below, for example.

6) *Foo jëm?*
where.you be.heading.for
'Where are you going?'
[Fal, Santos, and Doneux 1990 under *jëm*]

In the next example we see this notion of goal-directed motion mapped in the Moving Ego metaphor.

7) *Déwén, ñungi ci jëm,*
next.year 1.PL:PRSNTTV LOCPREP be.heading.for
àggaguñu.
arrive:yet:NEG.1.PL
"Next year, we're heading for it; we haven't arrived yet."
[s T, An:117]

6.3.3.2. The relevance of Event Structure metaphors to Moving Ego.

We noted above that the phrase *dem ba liggéey bi jeex* 'go until the work is finished' in example 5d above lends itself to analysis in terms of both Moving Ego and Event Structure. In 6.2.4 above we saw an Event Structure metaphor in which activities are construed as locations. In a related metaphor, making progress in a purposeful activity is construed as forward motion and achieving a purpose is construed as arriving at a destination. This (compound) metaphor can be called the Goal Oriented Activity metaphor (Grady 1999b, Lakoff and Johnson 1980, 1999:190; Lakoff and Turner 1989). The metaphor is exemplified in 8a below.

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8) a. *Ñungi* *jëm* *kanam.*
3.PL:PRSNTTV be.heading.for front
"We're heading ahead."
'We're making progress' (on a job).
[AK, 51399]

English has expressions very similar to 8a. For example, one could say *We're moving ahead* to mean that progress was being made on a job. The mapping for the Goal Oriented Activity metaphor is given below.

Table 6.2: The Goal Oriented Activity metaphor.

Mover.	→	Agent.
Locations along a path.	→	Series of actions.
Forward movement.	→	Making progress.
Arriving at the end of a path.	→	Achieving a goal.

The next examples talk about reaching points on the metaphorical path to completion.

9) A: *Foo* *tollu* *ci* *sa* *liggéey?*
where.you be.at.a.point.equivalent.to LOCPREP your work
'Where are you at in your work?' (The speaker is asking how much progress has been made in the work.)

B: *Àgg* *nañ* *ci* *xaaj* *bi.*
arrive PERF.1.PL LOCPREP partition the
"We've gotten to the partition" [i.e., the halfway point].
'We're halfway done.' [AK, 5699]

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The above examples are clearly about purposeful activity rather than specifically about time, thus they are analyzed as instantiating an Event Structure metaphor rather than Moving Ego. In the Moving Ego metaphor, moving forward maps onto experiencing later and later times, which is inevitable in life. In the Goal Oriented Activity metaphor, forward motion maps onto progress, which is not inevitable. However, Moving Ego and the Goal Oriented Activity Metaphor share essential structure: As progress is made in a goal oriented activity, time necessarily elapses (Lakoff and Turner 1989). As the actor metaphorically moves forward in the activity, she may also be understood as moving forward in time according to the Moving Ego metaphor. This shared structure makes it possible for a event to be construed in terms of both metaphors at once. (Cf. Sweetser 1995, forthcoming, on co-orientation of metaphorical mappings.)

It is natural that the Goal Oriented Activity metaphor and Moving Ego should share essential structure and be compatible as just described. This is because good examples of the experiential grounding for the Goal Oriented Activity metaphor are also good examples of the grounding for Moving Ego (though not necessarily vice versa). That is, the grounding of the Goal Oriented Activity metaphor involves going somewhere to get or do something, and achieving the purpose in this grounding scenario involves arriving at the end of the path that leads to the place where something will be obtained or an action will be performed. Thus, for example, Binta going to find the gourds in the marketplace scenario of Chapter 4 instantiates the experiential grounding for both Moving Ego and the Goal Oriented Activity metaphor (cf. M. Johnson 1987, Lakoff 1987, Lakoff and Johnson 1999).

To summarize, *dem* 'go' expressions are an unmarked way to code temporal change via the Moving Ego metaphor. Moving Ego *dem* expressions do not necessarily involve goal-directed motion but they are compatible with it. In cases where goal-directed motion is involved, *jëm* 'be

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heading for' may be used with Moving Ego. We saw an Event Structure metaphor — the Goal Oriented Activity metaphor — that construes progress as forward motion and the achievement of a purpose as an arrival at a destination. The Goal Oriented Activity metaphor and Moving Ego share essential structure and a single construction can instantiate both metaphors.

6.3.3.3. Verbs of passing

The expressions that we saw above with *dem* 'go' involve an interesting overlap between metaphorical representation of Ego's specifically temporal experience and her experience of engaging in purposeful activity. In this subsection we will return to looking at more specifically temporal concepts that have to do with the relation between Ego's "now" and some RP. We will see however that an understanding of Ego's beliefs and purposes remains relevant to temporal metaphor.

The verbs to be examined here are interesting because they encode distinctions in scenarios of motion that English verbs of motion do not pay much attention to. The fact that this whole group of verbs participates to one degree or another in metaphorical temporal expressions is striking evidence that we are dealing with a conceptual mapping rather than just words and their individual histories. On the other hand, there are certain preferences involving these words which show that what is relevant to temporal metaphor in each case is more than just a schematically defined motion event.

The verbs in this group all involve a motion event similar to one that could be talked about with the word *pass* in English. In such an event, the mover starts out in a region on one side of a RP and goes to a region on the other side.

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Physical motion uses and Moving Ego uses

The most typical of these verbs for talking about time in Wolof is *paase*, borrowed from French as a synonym of the native Wolof word *weesu* 'go beyond'.[5] Here is a spatial example.

10) a. *Boo paasee pom bi mungi*
when go.beyond:ANT bridge the 3:PRSNTTV
ci sa càmmooñ.
LOCPREP your left
"When you pass the bridge it's on your left."
'It's on your left after the bridge.' (Giving directions.)
[att.] [Kaolack]

The next example was intended with a temporal meaning when it was uttered, but the sentence itself is ambiguous between a spatial and a temporal interpretation. The lexeme *weesu* 'go beyond' could be used instead of *paase* in 10a above as well as in both senses of 10b below. The spatial/temporal ambiguity in 10b shows that the experiential grounding we have identified for Moving Ego applies to *paase* 'go beyond', as well as to *kanam* 'front' and *gannaaw* 'back' as we saw in Chapter 4.

10) b. *Li ci gannaaw, xam nga paase nañ ko.*
REL LOCPREP back know PERF.2 go.beyond PERF.1.PL 3.OBJ
"That which is in back, you know we've gone beyond it."
[s L, Ba:109]

Next are examples of *weesu*.[6] *Paase* could be substituted for *weesu* in both cases.

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11) a. *Weesu nga kër gi ngay wut.*
go.beyond PERF.2 residence REL 2.SUBJ:IMPF look.for
'You have gone beyond the residence you're looking for.'
[Fal, Santos, and Doneux 1990:243]

b. *Bi ñu weesoo tabaski, ci (jamono jooju)*
when 3.SUBJ go.beyond:ANT Tabaski LOCPREP (times those)
la suma taaw bi juddu.
NONSUBJ.FOC my first.child the be.born
"When we went beyond Tabaski, it was in those times that my first child was born."
'My first child was born after Tabaski.'

It has been noted by many scholars that motion metaphors for time tend to involve a schematic portrayal of motion events in terms of one-dimensional movement on the front/back axis relative to a RP. The figure and RP may themselves have front/back orientation, and the metaphorical motion is often conceived of as occurring relative to a deictic center (Bull 1971/1960, Benveniste 1965, Clark 1973, Fillmore 1997/1971, Lakoff and Johnson 1980, Traugott 1975). As we have seen (section 5.2) Emanatian (1992), Fleischman (1982a,b), and Sweetser (1988) have considered how questions of deixis are relevant to metaphorical motion in the Moving Ego metaphor. Moreover, Emanatian (1992:9), citing previous sources, notes that "'go' futures, as distinct from 'come' futures, tend to have additional flavors of intention, purpose, or volitionality (Fleischman 1982a, 1983; Bybee, Pagliuca and Perkins 1991)."

Questions of intent, purpose, volitionality, and I would add *belief*, are also relevant to the scenario of "passing" that is under discussion. The physical-motion meaning of *paase/weesu* is based on what we called the 'beyond/outside' schema in section 4.7. That is, *paase* or *weesu* presupposes

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an origin, a directionality, and a boundary. The area on the far side of the boundary from the origin is construed as somehow significantly different from the area on the near side.

A typical way for this boundary to be instantiated is as a goal. For example in 11a, before the mover reaches the RP (the house), her progress contributes toward getting to the goal, but if she goes beyond the RP, continued movement in the same direction no longer serves the purpose she has in mind. *Paase/weesu* and the English translation *go beyond*, as lexemes, are sensitive to this notion of directionality and boundary. English *go past* can also be used in situations where the inference is 'go to far' or 'go beyond'. But what distinguishes *go past* is that it can be used in situations where movement relative to a RP but not directionality/boundary is at issue. An example of this is *Daddy goes past/?beyond the garden every day on his way home from work.* An analogous distinction holds in Wolof between *paase/weesu* 'go beyond' and *romb* 'go past'.

Another word with temporal uses like those of *weesu* is *jàll* 'get past'. Spatial uses presuppose that the RP of *jàll* is a barrier or boundary of some kind, and thus the 'beyond' schema is relevant here too. In the example below, *jàll* forces the construal of the mat as a barrier or boundary, as *get past* might encourage such a construal in English.

12) a. *Jàll na basaŋ gi.*
get.past PERF.3 mat the
'#She went across/over the mat.' 'She got past the mat.' (The mat is construed as a barrier or a boundary.)

Next is a temporal example.

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b. *Bés bu mu jàll rekk boobu paase na.*
day REL 3.SUBJ get.past only DISCREF go.beyond PERF.3
"Every day that she gets·past — that one has gone beyond."
'Every day that she passes is past.'
[sf N, 101197]

To summarize, motion uses of the verbs we have just seen — *paase* 'go beyond', *weesu* 'go beyond', and *jàll* 'get past' -- each involve certain presuppositions regarding the motion event that have to do with more than just a simple portrayal of spatial relations: The two regions demarcated by the RP of the verb are considered to have unequal status, direction of motion is crucial, and the actor is typically seen as intending to achieve some purpose.

By contrast, the unmarked verb of "passing" in Wolof is *romb* 'go by'. The following example shows that *romb* — but not *weesu, paase,* or *jàll* -- may be used when the mover is not construed as having any particular goal in mind.

13) a. *Sàmba romb/?weesu/?paasee/?jàll na*
Samba go.by/go.beyond/go.beyond/get.past PERF.3
ma ci yoon wi te faalewu ma.
1.OBJ LOCPREP road the and pay.attention.to:NEG 1.OBJ
'Samba walked by me on the street and didn't pay any attention to me.'
(Cf. *?Samba went beyond me on the street and didn't pay any attention to me.)*
[s G, 111997]

There is variation among speakers regarding the temporal use of *romb*. While all speakers accept *weesu, paase,* and *jàll* in temporal metaphors

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involving translational motion, some reject *romb*. This will be discussed below. Following is an example of a Moving Ego use of *romb*.

b. *Dimaas bi ñu romb rekk.*
Sunday REL 1.SUBJ go.by only
"It's just the Sunday we went by."
'It was just last Sunday.' (i.e., the Sunday preceding the moment of speech.) This was said by way of clarifying the meaning of *dimaas bale* "That Sunday" (distal from speaker and addressee).
[s G, Ba:86]

There is another word that deserves to be mentioned here, *jéggi* 'go over, step over'. *Jéggi* has uses, in which it is more or less a synonym of *jàll*, where it is used to talk about crossing a river, street, or ocean. Whereas I have observed spontaneous temporal uses of *weesu, paase, jàll,* and *romb,* temporal *jéggi* has appeared only in elicitation. According to AK, temporal uses of *jéggi* have a literary or poetic feel to them. A Moving Ego use of *jéggi* is exemplified below.

14) *Bu ñu jéggee tabaski, dinaa toppatoo sa liggéey.*
when 1.PL.SUBJ go.over Tabaski FUT.1 attend.to your work
"When we have gone over Tabaski, I'll attend to your work."
'When Tabaski's over I'll attend to your business.'
[AK, 121098]

With the exception of *jéggi,* the verbs just discussed have Moving Time as well as Moving Ego uses. We will move on now to an exemplification of Moving Time uses of these and other verbs.

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Moving Time uses of verbs of passing

Next, *paase, weesu,* and *jàll* are exemplified in Moving Time uses.

15) a. *Bu tamxarit <bi> {paasee/weesoo/*
when Tamxarit <the> {go.beyond:ANT/go.beyond:ANT/
jàllee/wéyee} nga duggu diggi.
get.past:ANT/continue.on.it's.way:ANT you enter:MID Diggi.
"When (the) *Tamxarit* {goes beyond/gets past/continues on its way} you enter *Diggi.*"
'When *Tamxarit* has passed, you enter *Diggi.*' (I.e., the month of *Diggi* is after the month of *Tamxarit.*) [s XW, Xi:120]

And here is a Moving Time use of *romb.*

b. *Dafa romb ... dafa paase ... paase<woon> nale.*
SFOC.3 go.by SFOC.3 go.beyond go.beyond<PAST> like.that
"It went by ... passed ... passed like that" [distal from the speaker and addressee].
'It has passed. It's in the past.'
(The speaker was talking about a particular Sunday in order to explain the meaning of *dimaas bale* 'that Sunday'. The interview was on a Saturday.)
[s G, Ba:86]

Thus, *paase, weesu, jàll,* and *romb* can all be used in both Moving Ego and Ego-centered Moving Time with the same kind of meaning. This suggests that the two metaphors, as instantiated by these predicators, are figure-ground reversals of each other (cf. Lakoff 1993, Lakoff and Johnson 1999). The way Moving Ego and Moving Time complement each other in

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example 15a further supports the appropriateness of this characterization. That is, the passing of the month of *Tamxarit* entails Ego's entering the month of *Diggi*. (*Dugg* 'enter' will be discussed below.)

In example 15a above we saw the predicator *wéy* 'to continue on one's/its way'. *Wéy* appears in Moving Time but not Moving Ego expressions for the following reason: In order for a predicator like *wéy* to appear in a Moving Ego metaphor, the RP relative to which metaphorical motion occurs would have to be mentioned explicitly. As is the case with *paase, weesu* and *jàll*, the speaker has to say what it is that Ego goes past. The RP of *wéy* cannot be stated explicitly because *wéy* is intransitive.

The requirement that the RP be mentioned explicitly in Moving Ego expressions with *paase, weesu,* and *jàll* is directly motivated by physical motion uses of these verbs: Only in cases where the RP is at the deictic center can it typically be omitted, and in the Moving Ego cases the RP is metaphorically distal. Interestingly, in Ego-centered Moving Time expressions, the convention just mentioned for *paase, weesu,* and *jàll* is reversed — the RP cannot be mentioned. These facts highlight the tendency discussed in section 2.3 for aspects of the ground of the speech event to be treated as *common ground* among the speech-act participants and thus to not be mentioned.

Below is an example of *wéy* that occurred in relatively spontaneous speech.

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16) *Li nga jis tey, bu ëllëgee, boobu*
REL 2.SUBJ see today when tomorrow:ANT DISCREF
wéy na. Jisaatoo ko.
go.on.it's.way PERF.3 see:again:NEG.2 3.OBJ
"What you see today, when it's tomorrow, that thing has gone on it's way. You don't see it again."
'What you see today — tomorrow it will have passed. You won't see it again.'
[sf N, 101197]

Unlike *romb* but like *paase, weesu,* and *jàll, wéy* is uniformly judged appropriate in Moving Time expressions. And also like *paase* and *jàll, wéy* seems (impressionistically) to be used regularly and frequently in temporal expressions, whereas *romb* is less common. (*Weesu* is not heard frequently in either temporal or spatial uses, presumably because it has been largely replaced by *paase.*)

The bias towards *paase* 'go beyond', *weesu* 'go beyond', *jàll* 'get past', and *wéy* 'continue on one's way' over *romb* 'go by' in temporal expressions gives us an indication of what aspects of spatial experience are relevant to the temporal concepts involved. In the case of the first four verbs, the direction in which the movement occurs and the beliefs and purposes of Ego or the conceptualizer are highly relevant. For example, in the characterization of a time as having *passed* it is highly relevant that the time will not come back and that whatever opportunities were associated with that time are probably no longer available. This kind of nuance is typical of what is encoded in spatial scenarios with *weesu/paase* 'go beyond.' For example, if the vehicle that you were hoping to ride to a certain town has *gone beyond* (you), that means you missed it.

Nonetheless, *romb* 'go by' participates in temporal metaphors of translational motion. Importantly, this testifies to the productivity (Grady

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1997a, Lakoff and Johnson 1980, 1999, Lakoff and Turner 1989) of Moving Time and Moving Ego metaphors. It is not just that certain words are associated with certain experiences and thus develop temporal meanings. It also appears to be the case that speakers have understandings of metaphorical mappings which they can apply somewhat freely to words and constructions that have appropriate meanings. It makes sense that *romb* 'go by' is usable in Moving Time and Moving Ego metaphors because the semantics of belief and purpose that is conventionally associated with the other four verbs featured in this subsection (*weesu, paase, wéy, jàll*) is in many cases implicated by the more schematic event of *going by* that *romb* encodes. This is relevant to how we understand diachronic lexical-semantic change because it shows that inferences based on the schematic semantics of a word can interact with metaphor to produce an extended use. (cf. Hopper and Traugott 1993; Traugott 1985b etc; Traugott and König 1991).

6.3.3.4. Endpoint-focus verbs: ñów *'come' and* àgg *arrive.*

Ñów 'come' was discussed extensively in Chapter 2 in regard to its participation in the Ego-centered Moving Time metaphor, where it is very common. Here are a couple of examples from Chapter 2 for the sake of completeness.

17) a. *Noor* *ñów* *na* *léegi.*
dry.season come PERF.3 now
'The dry season has come already.'
[att. Lu:144]

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17) b. *Séebéet mungi ñów fu noor bi bëgg jeexe.*
Séebéet 3:PRSNTTV come where dry.season the want finish.VAL
"*Séebéet* [a season] is coming where the dry season wants to finish at."
'*Séebéet* comes when the dry season is about over.'
[AY att. Lu:135]

As we have seen, *ñów* means 'come'. Interestingly, Wolof has another word for 'come', *dikk*. Native speakers say that *ñów* and *dikk* have the same meaning and can readily invent contexts in which *ñów* and *dikk* are interchangeable, and as far as I know, the two words are regularly interchangeable in spatial and temporal contexts. The fact that *dikk* 'come' appears in the Ego-centered Moving Time metaphor in the same range of contexts as *ñów* 'come' is further evidence that we are dealing with a conceptual metaphor and not just a lexical development. This is comparable to certain evidence from English in which unconventional expressions are interpreted according to conventional conceptual metaphors. An example of this (from Grady, Oakley, and Coulson 1999:102) is *You'd need an electron microscope to find the point of this article*, which is interpreted easily by speakers of English according to UNDERSTANDING AS SEEING as meaning that it is hard to find out what the point of the essay is. (And probably also according to IMPORTANCE AS SIZE as meaning that the point is insignificant.) This sort of productivity shows that metaphor has to do with conceptual mappings and not just uses of words.

In the following example the same proposition ("It's something which is coming") is said twice for emphasis, once with *dikk* and once with *ñów*.

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17) c. ... *Waaye luy* *dikk* *la,* *luy* *ñów*
but REL:IMPF come NONSUBJ.FOC.3 REL:IMPF come
la. *Dana agsi* *enʃaalla.*
NONSUBJ.FOC.3 FUT.3 arrive:VEN God.willing
"... But it's something that is coming, it's something that is coming. It'll arrive God willing." The speaker is talking about certain events predicted to occur in the Qur'an, saying that they will happen some day.)
[s T, Xi:42]

In the next example *ñów* could be put in place of *dikk*.

d. *Dëes-ëer* *dikkagul.*
two-o'clock come:yet:NEG
'Two o'clock hasn't come yet.'
[att.] [YY, Ba:154 (DFS)[7]] (The context was a discussion of what time it was.)

Regarding Ego-centered Moving Time, what is said of *ñów* can generally also be said of *dikk*. Thus, I will not mention *dikk* much in the rest of the dissertation.

Moving Ego uses of *ñów* are very rare. The use of *ñów* that appears in the following example is radically decentered, having a meaning similar to that of *àgg* 'arrive'. (*Jaar* 'go via' will be discussed separately.)

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17) e. *Paskë dimaas lañ jaaroon, ñu jàll*
because Sunday NONSUBJ.FOC.1.PL go.via:PAST 1.PL.SUBJ get.past
dimaas ñówaat ci beneen dimaas ....
Sunday come:again LOCPREP another Sunday
"Because it's Sunday that we went by way of, we got past Sunday, came again to another Sunday..."
'We passed Sunday and came to another Sunday'; I.e., 'A Sunday has passed and it's Sunday again.' (Where the speaker speaks of 'going via' (*jaar*) a Sunday and then in the next clause 'getting past' (*jàll*) a Sunday, this is the same Sunday both times — the speaker is repeating himself. This example occurred as part of a discussion of whether a Wolof expression translating as 'that (distal) Sunday' could mean 'the Sunday before last'.)
[s G, Ba:86]

In examining the verbs *ñów* 'come' and *dem* 'go' we saw that they are often involved in a mapping of motion onto continued temporal change. The meaning of *àgg*[8] 'arrive' in temporal metaphors, by contrast, typically (if not necessarily) has to do with the individuated occurrence of a time or event. This is predictable from the punctual Source-Domain semantics of *àgg*. This contrast between *ñów* and *àgg* can be seen in example 17c above (where *àgg* appears in combination with ventive *-si* as *agsi*), and it is further exemplified below for Moving Ego and Moving Time. The example below maps an arrival onto the expected occurrence of a date.

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Moving Ego

18) a. *Léegi nag buñ demee ba àgg la-vensiis,*
now then when:we go:ANT to.the.point.of arrive the.twentysixth
yaangi ci nawet.
2:PRSNTTV LOCPREP rainy.season.
"Now then, when we have gone to the point of arriving at the twenty-sixth, you're in the rainy season."
[s L, Ba:100]

The next example explicitly contrasts the mapping of goal directed (forward) motion onto expectation with the mapping of arrival onto occurrence.

18) b. *Déwén, ñungi ci jëm,*
next.year 1.PL:PRSNTTV LOCPREP be.heading.for
àggaguñu.
arrive:yet:NEG.1.PL
"Next year, we're heading for it; we haven't arrived yet."
[s T, An:117]

The example below involves the same semantic contrast as the one above, but with the roles of mover and goal reversed. That is, in the Moving Time example below, it is the motion of an object mapped on to a time, rather than Ego's motion, that codes expectation. In both cases the expected occurrence is portrayed as an arrival.

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18) c. ... *Ëllëg moom dafay ñów, te agseagut.*
tomorrow 3.EMPH SFOC.3:IMPF come but
/agsiagut/
arrive:VEN:yet:NEG
'Tomorrow's coming but it hasn't arrived yet.'
[s L, Ba:109]

The lexeme *àgg* appears as *agsi* (i.e., *àgg* plus ventive *-si*) in Moving Time metaphors because the arrival involved metaphorically occurs at the location of the speech act. Whereas the above example involves a projected metaphorical arrival, the next example involves an actual metaphorical arrival.

18) d. ... *Agsi na daal.*
arrive:VEN PERF EMPH
"...It has arrived." (Speaking of a particular hypothetical time invented for the sake of discussion.)
[s G, Ba:43]

To summarize, the Source-Domain semantics of *àgg* reliably predict its Target-Domain semantics, including its aspectual structure. It is of crucial importance that consistent inferences can be made between metaphorical propositions and that these have the temporal meanings that the metaphorical mappings predict (Lakoff and Johnson 1980, 1999.) For example, to paraphrase two of the Wolof examples just given, if something is coming one may infer that it has not arrived yet (example 18c); likewise, if we are headed for someplace one may infer that we have not arrived there yet (example 18b). See Lakoff and Johnson (1980, 1999) for discussions of

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inferencing and metaphor in English. (Cf. the *invariance* hypotheses. [Brugman 1990, M. Johnson 1987, Lakoff 1990, 1993; Turner 1991.])

Linguists and philosophers such as Jackendoff (1983, 1990:8), Lakoff and Johnson (1999), and Langacker (1997) have hypothesized that certain kinds of concepts are common to all people regardless of language or culture. Lakoff and Johnson argue that this sameness is due to shared experience based on certain consequences of living in a human body. The inferences and their temporal meanings which I have just discussed are evidence of such a crosslinguistic sameness. The current work is thus a contribution to an effort — being undertaken by many scholars working on many languages[9] — toward developing adequate theories of meaning in human language.

Cyclical motion

Before moving on to the next subsection, it is worth noting that certain Wolof expressions treat times as entities that come, go, and then return; i.e., treat times as moving cyclically, a variety of goal-directed motion. One example of this is the Wolof word for week, *ayu-bés*, literally 'turn:of-day'; (that is, in a week each day takes its turn once). A more productive kind of example involves the word *dellu-si* 'return-VENTIVE', as in the next example.

19) ... *àjjuma ba* *àjjuma dellusi* ...
Friday to.the.point.of Friday return:VEN
"Friday until Friday comes back"
'for a week'
[Kesteloot and Mbodj 1983:51]

The contrast between Wolof and English here is of the familiar sort in which both languages have the metaphorical construal in question but it is

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elaborated more in one language than the other, and its stylistic status is different in the two languages. English has expressions like *when spring comes around again*, or *When Monday comes around, I always get the blues.* Such expressions are probably *productive* in English but they are nonetheless stylistically marked. I.e., cyclicity is more ordinary in Wolof than in English for talking about time.

6.3.4. Ego's Measured location on a path: tollu *'be equivalent to, {be at/get to} a point equivalent to'*

This subsection is devoted to the verb *tollu*[10] 'be equivalent to, {be at/get to} a point equivalent to' (cf. Munro and Gaye 1997). The other verbs we have studied in this section (6.3) are verbs of motion with rather ordinary-sounding translations in English such as 'come', 'go', 'pass', 'arrive'. *Tollu* strictly speaking is not a verb of motion; rather it is primarily a verb of measurement. As a locational verb it codes location relative to a framework in a motion scenario. Because it codes location in a place, *tollu* in temporal uses involves WHEN AS WHERE (section 6.2) in addition to Moving Ego. Here is an example of *tollu* as structured by Moving Ego and WHEN AS WHERE.

20) a. *[Jamano yi ñu tollu] [néeg du fa ñàkk].*
times the.PL 1.PL.SUBJ be.equivalent room IMPF:NEG there be.lacking
"The times which we are at a point equivalent to: rooms are not lacking there."
'These days there's no lack of rooms there.' (*fa* 'there' = the university campus. The speaker's point is that since it's summer, it will be easy to find an empty classroom at the university.)
[att.] [AK]

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Now let us look at some physical uses of *tollu*. First, the basic measurement sense is exemplified.

20) b. *Gis naa benn xaal wu tollu ni basketbal.*
see PERF.1 one watermelon REL be.equivalent like basketball
[AK, Hai:120]
"I saw a watermelon that measured like a basketball."
'I saw a watermelon the size of a basketball.'

It is translational motion uses such as the one exemplified below that are most directly relevant to expressions of temporal location. This example involves a scene in which an automobilist opened his door right in front of an oncoming bicycle rider. I will gloss *tollu* consistently in the morpheme-by-morpheme line as 'be equivalent', and then, for motion uses, in the semi-literal translation I will show which of '*get to*' or '*be at*' 'a point equivalent to' is more appropriate.

20) c. *Bi ma tollu ak taatu woto bi la*
when 1.SUBJ be.equivalent with rear:PD car the NONSUBJ.FOC.3
ubbi buntam
open door:GEN
"It was when I got to a point equivalent to the rear of his car that he opened his door."
'He opened his door right when I got to the rear of his car.'
[AK, Hai:121]

Uses like the one in 20c above focus attention on the precise place at which something is located relative to the other relevant places and things in the scenario being depicted. The predication of the location of the subject of *tollu* is framed as an act of measurement. What measurement does is

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compare a target to a standard on a scalar parameter; (cf. Langacker 1987, section 3.1.2). In the watermelon example above, the target is the watermelon, the standard is a typical basketball and the parameter is size. In 20c above, the target is the location of the bicyclist (mover/figure), the standard is the location of the rear of the car (RP), and the parameter is degree of advancement in the direction of motion. Temporal uses are precisely analogous to physical uses like the one in the bicyclist example, as shown in the mapping below. This mapping is a combination[11] of WHEN AS WHERE and Moving Ego to which the lexical semantics of *tollu* 'be at a point equivalent to' contribute structure (Cf. Grady 1997a).

Table 6.3: The combination of WHEN AS WHERE *and Moving Ego instantiated by* tollu *expressions.*

Entity whose location is in question (mover/figure).	→	The time whose WHEN-relation is in question (figure) = Ego's "now".
Place with respect to which location is determined (RP).	→	The time with respect to which a WHEN-relation is determined (RP).
Location of RP in a series of places.	→	Occurrence of RP in a series of times.
Location of figure at RP.	→	Ego's experience of "now" simultaneous with temporal RP.

According to WHEN AS WHERE, times are construed as places. One of the things people know about places is that they have stable relations to other places. In the grounding scenario for the Moving Ego metaphor, Ego moves along a path and is successively located at points farther in the direction of motion. A combination of these construals yields a scenario in which Ego is successively located at different places in a linear array. The places map onto times, and the place at which Ego is located maps onto "now." These metaphors and their combination are illustrated in the diagrams below.

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Diagram 6.2a below depicts Moving Ego, Diagram 6.2b depicts WHEN AS WHERE, and Diagram 6.2c depicts the combination of the two.

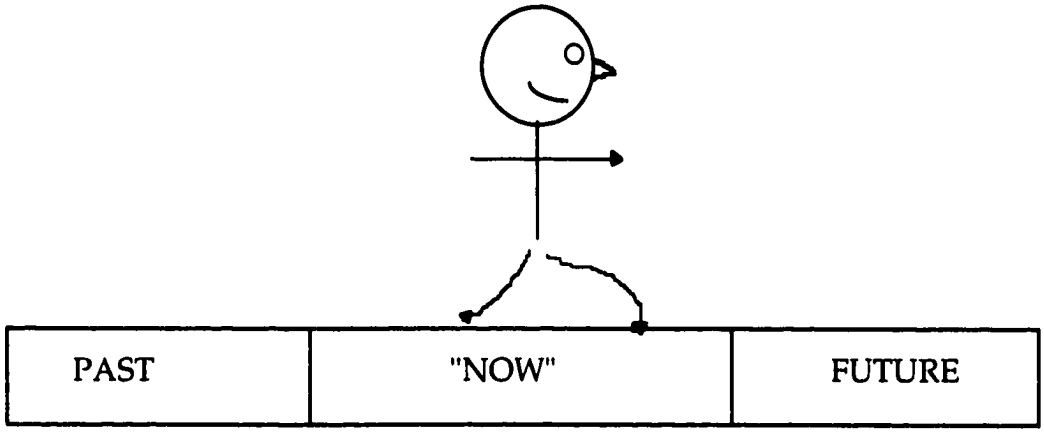


Diagram 6.2a: Moving Ego. E.g., Li ci gannaaw ... paase nañ ko. Léegi ñungi dem ci kanam. *'That which is in back, we've passed it .... Now we're going ahead.' (Section 6.3.3.1, example 5a.)*

X [Figure]

[R P]

Diagram 6.2b: WHEN AS WHERE. E.g., Ñungi ci tereet. *'We're in the trading season.' (Section 6.2. Example 1a.)*

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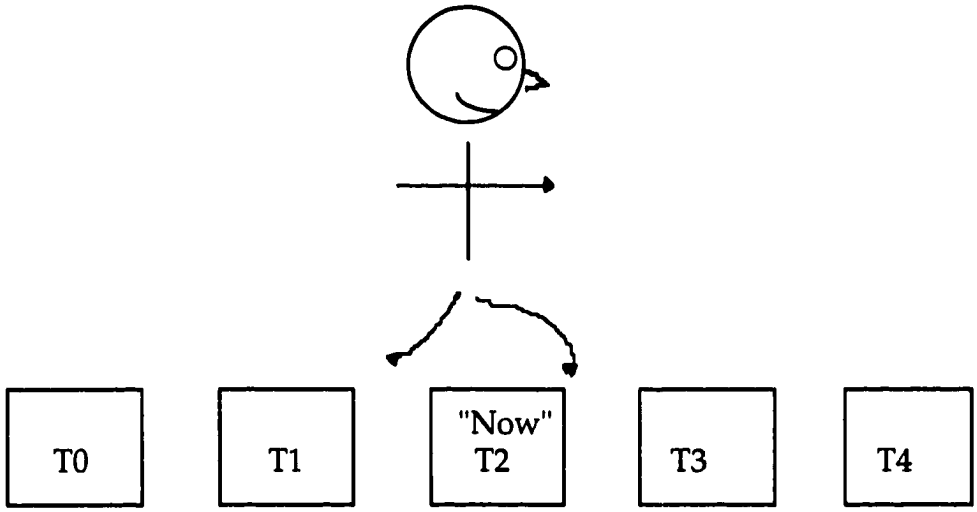


Diagram 6.2c: The combination of WHEN AS WHERE *and Moving Ego instantiated by* tollu *expressions. E.g.,* Ñungi tollu ci ñaari waxtu. *'It's about two o'clock. (Example 22a below, this section.)* "T0, T1..." means 'time zero, time one' etc. This represents the idea that the metaphor depicts the present as a point in an ordered progression.

When two metaphors combine, as in this instance, the result is added structure — in this case the elaborated conceptualization of a series of places. Grady 1997a calls this sort of structure *emergent structure*. This is different from the case discussed above in section 6.3.3 in which a single expression such as *dem ba liggéey bi jeex* 'go until the work is finished' is compatible with two different metaphors. In the case from section 6.3.3, no new structure arises.

Before looking further at *tollu*'s temporal uses, let us look at another motion/location example of how *tollu* is used to impose a concept of ordered progression on a physical scene. The speaker in the example describes a scene in which a vulture is circling the carcass of a cow. Whereas Wolof specifically encodes (with *tollu*) that the vulture got to a point on its path that was

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equivalent in the imposed scenario to the location of the vulture's eye, in English we code the configuration more loosely and just say that the vulture got to the cow's eye.

21) *Fa mu koy wëre ba*
where 3.SUBJ 3.OBJ:IMPF go.around:VAL to.the.point.of
tollook bët ba, daldi taxaw, jël aw sàllam, jam
be.equivalent:with eye the.DIST then stop take ART beak:GEN stab
ko ca bët ba ....
3.OBJ LOCPREP.DIST eye the.DIST
"Where he is circling it to the point of being in a position equivalent with the eye, he then stops, takes his beak, stabs it in the eye..."
'As he's circling it, when he gets to the eye, he stops, takes his beak, and stabs it in the eye...'
[Géy 1997:23 (3499)]

Now we turn to further exemplification of *tollu*'s temporal uses. All of the temporal examples below exemplify the combination of Moving Ego and WHEN AS WHERE as specified in Table 6.3 above. In 22 below the notion of Ego's metaphorical location at a point in an ordered progression is brought to the fore by the mention of clock time.

22) a. *Ñungi tollu ci ñaari waxtu.*
1.PL:PRSNTTV be.equivalent LOCPREP two:PD hour
"We are at a point equivalent to two o'clock."
'It's about two o'clock.'
[AK, Lu:3]

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22) b. *Fi ñu tollu nii ñaari waxtu jot na.*
where 1.PL.SUBJ be.equivalent like.this two:PD hour reach PERF.3
"Where we are equivalent to like this two o'clock has reached."
'It's two o'clock right now.'

The imprecision in the meaning of 22a above is probably due to an implicature whereby talking of measuring (with *tollu*) instead of using the more direct expression Ñaari *waxtu jot na* "Two o'clock has reached" invites the inference that the measuring is approximate. Example 22b shows that when a *tollu* expression occurs together with the more direct expression, the implicature of imprecision is lost. Also in (b), the presence of the demonstrative *nii* 'like this' emphasizes reference to the (more or less exact) moment of speech.

In the next example, the speaker rephrases word *léegi* 'now' with a *tollu* expression which is identical to the first clause of 22b above. The effect in 23 below is to construe the concept "now" in terms of the mapping in Table 6.3 as a location in an implicit ordered progression at a point after the past and before the future.

23) *... léegi, maanaam fiñ tollu nii ...*
now that.is where:1.PL.SUBJ be.equivalent like.this
"...now, that is where we measure to like this..." (This is a characterization of the notion "now.")
[s XW, Xi:117]

This construal of *léegi* 'now' as "where we *tollu*" takes for granted the progression from past to future just mentioned and locates the moment of the speech act in that progression.

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In this subsection, I hope to have shown that spatial *tollu* expressions are used to construe a figure as situated at a location in an ordered series of locations. In the corresponding temporal *tollu* expressions, the analogous series is defined by Ego's experience of past, present, and future, and the metaphorical construal of times as places on a path on which Ego is moving. Temporal *tollu* expressions exemplify a combination of Moving Ego and WHEN AS WHERE.

6.4. Metaphorical movement of an entity other than Ego toward a region that maps onto a later time.

There are two kinds of temporal metaphor in which movement of an entity other than Ego maps onto change from an earlier to a later state of affairs. One of these depicts the present as an entity that is moving forward. The other depicts the continuation of an ongoing process as movement undergone by an entity, where the entity maps onto the process.

6.4.1. NOW AS A MOVING ENTITY.

Examples are given below for a metaphor in which the present is construed as moving toward the future (cf. Lakoff and Turner 1989, Yu 1998). We will call this metaphor NOW AS A MOVING ENTITY.

1) a. *The hour is approaching midnight.*
b. *It's getting close to Christmas.*
c. *It's past your bedtime.*

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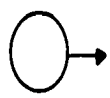
d. ... *Damay dem nag, kanam la jëm.*
SFOC.1:IMPF go then front NONSUBJ.FOC.3 be.heading
"I'm going [through time]. It [the present] is heading ahead." (The speaker is saying that he is moving through time and the present is moving forward.)
[s L, Ba:121]

Lakoff and Turner (1989:45) attribute the type of expression in 1a-b to a version of the same metaphor as Moving Ego expressions like *We're getting close to Christmas*. What we have direct evidence for is a metaphor that construes "now" as an object that moves continuously in the same direction; i.e., on a linear path. The mapping for this metaphor is presented below.

Table 6.4: Mapping for NOW AS A MOVING ENTITY

SOURCE		TARGET
A moving entity on a linear path.	→	"Now."
A region farther in the direction of motion.	→	The future.

NOW AS A MOVING ENTITY is depicted in the diagram below.



PAST "NOW" FUTURE

Diagram 6.3: NOW AS A MOVING ENTITY. *E.g.,* ... Kanam la jëm *'It's heading ahead.' (Example 1d above.)*

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There is a pervasive kind of experiential correlation that serves as the grounding for this metaphor: whenever something keeps moving on a linear path, at each later moment it is farther in the direction of motion (Grady i.p.c., Sweetser i.p.c, 1988). Moving Ego can be seen as a special case of NOW AS A MOVING ENTITY if Ego's location is construed as a moving entity. (To picture your location as a moving entity imagine walking down a road at noon with your shadow under you. If you watch your shadow you can see an image of your location moving down the road.)

Clearly an important special case of a moving entity that motivates NOW AS A MOVING ENTITY is the sun, as suggested by Lakoff and Turner in their discussion of TIME MOVES (1989:45). Lakoff and Turner observe the following. "...The sun, which is a natural model for analog clocks, moves along a fixed path, and its location on that path determines the present moment. Thus, the sun, as the present moment, is always moving toward foreseeable future moments." In other words, the sun stands in a constitutive indexical relationship to the time of day. (Cf. Alverson 1991.)

The following two examples are evidence that Wolof speakers in Senegal see the sun as being in a constitutive indexical relationship with the time of day. The examples also show how *tollu* 'be equivalent to, get to (a point of reference)' is used to measure time in terms of the sun's movement. The uses of *tollu* below provide important motivation for Moving Ego uses of *tollu* such as those we saw in the previous section, and attest to the relatedness of NOW AS A MOVING ENTITY and Moving Ego.

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2) a. ... *Ñun, buñ toogee ba jant bi tollu*
1.PL.EMPH if:1.PL.SUBJ sit:ANT to.the.point.of sun the be.equal
fii [pointing straight up] *ñu ne midi jot na.*
here 1.PL.SUBJ say noon reach PERF.3
[s L, Ba:106]
"If we sit until the sun measures here [pointing straight up] we say noon has reached."
'When the sun is here [pointing straight up] it's noon.'

The following example makes the same point as the preceding one.

b. *Bu naaj bi tàngee be*
when sun the be.hot:ANT to.the.point.of
tollu fii léegi, nga dem jàpp julli.
be.equivalent here now 2.SUBJ go perform.ablutions pray
Foofu ñu ne ko faaynaange.
DISCREF 3.PL.SUBJ say 3.OBJ faaynaange
"When the sun gets hot to the point that it measures here [pointing straight up], now you go perform ablutions and pray. That place [i.e. 'that time'] they call it *faaynaange*."
'When the sun reaches here [pointing straight up] you go perform ablutions and pray. We call that time *faaynaange*.'
(The sun is referred to with the word *naaj* 'sunshine, sun'.)
[s F, 101597]

In Moving Ego expressions, when English or Wolof speakers speak of WE, there is a metonymic connection between WE and "now." So, for example, if I say *We are about to enter the month of December*, I am talking about the status of "now" metaphorically, but there is also a metonymic relation between WE and "now." The indexical relationship between the speech act and

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"now" that underlies the metonymic relation between WE and "now" also makes it possible for expressions like *It's getting close to Christmas* to refer to "now" in the way that they do. On this view, Moving Ego and NOW AS A MOVING OBJECT are different mappings, but they both construe "now" as a physical entity that is indexically linked to the moment of speech. (They share generic structure.) The two metaphors construe the same Target-Domain semantics in minimally different ways. Compare *It's getting close to Easter* and *We're getting close to Easter.*

6.4.2. *PERSISTENCE AS CONTINUED MOTION.*

There is an Event Structure[12] metaphor that is closely related to NOW AS A MOVING ENTITY and Moving Ego. We can call it PERSISTENCE AS CONTINUED MOTION. It is exemplified for Wolof and English in 3 below. Examples like 3 code aspect rather than a WHEN-relation (Lakoff i.p.c). That is, 3 is about the internal temporal structure of the rainy season rather than about when the rainy season occurred (cf. Taub 1998).

3) *Nawet bi dem na be sori amut ndox.*
rainy.season the go PERF.3 to.the.point.of be.far have:NEG water
"The rainy season went to the point of being far and it didn't have water."
'The rainy season went on for a long time without rain.'
[s V, Xi:82].

English expressions like *The stew boiled from morning to night,* and *The candle burned through the night* provide further evidence for PERSISTENCE AS CONTINUED MOTION from English. The mapping is given in Table 6.5 below.

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Table 6.5: Mapping for PERSISTENCE AS CONTINUED MOTION

SOURCE		TARGET
A moving entity.	→	A state or event.
The distance (path) traversed by the entity.	→	The time during which a state obtains or an event continues to happen.
A region farther in the direction of motion.	→	A later time.

PERSISTENCE AS CONTINUED MOTION is diagrammed below. The metaphor depicts a state or event as continuing during the whole of some (not necessarily specified) period of time.



EARLIER LATER

Diagram 6.4: PERSISTENCE AS CONTINUED MOTION. *E.g.,* Nawet bi dem na be sori amut ndox. *'The rainy season went on for a long time without rain.' (Example 3 above.)*

Example 4a below, like 3 above, is about the internal temporal characteristics of a state. But unlike 3, 4a also codes a WHEN-relation, saying that the state in question (the existence of 'what you have') can persist until next year. 4a says literally that a material object, for example a hammer, can arrive at next year. I.e., the existence of the hammer is construed as an object that moves from region 1 to region 2, where *region 1* maps onto "this year" and *region 2* maps onto "next year". Metaphorically, this means that the hammer will continue to exist until next year.[13]

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4) a. *... Déwén nag, moom, loo ko ame tey tey mën nga ko fa denc ba déwén.*
"... As for next year, what you have today you can put away until next year."
... Loo am tey rekk mën naa egg déwén.
what.you have today only be.able PERF.3.MBA arrive next.year
"What you have today can arrive at next year." (I.e., it will last until next year.)
'It is possible that what you have today will endure until next year.'
(*Egg* is a variant form of *àgg* 'arrive'.)
[s L, Ba:120]

Example 4b below is a Moving Ego expression with a structure very similar to that of 4a. What distinguishes Moving Ego (in 4b) from PERSISTENCE AS CONTINUED MOTION (in 4a) is that Moving Ego depicts a "now" — an *experiential viewpoint* — that exists temporarily at successive times, whereas PERSISTENCE AS CONTINUED MOTION depicts the temporal profile of a state or continuing event. My motivation for analyzing PERSISTENCE AS CONTINUED MOTION and Moving Ego as two different metaphors is the same as my motivation for positing two versions of WHEN AS WHERE: I do not know of a single ontological category that includes *events and states* as well as *Ego's "now."*

4) b. *...Yow soo demee ba egg si bés*
2.EMPH if.you go:ANT to.the.point.of arrive LOCPREP day
boobu, dinga xam.
DISCREF FUT.2 know
"You, if you go to the point of arriving at that day, you will know."
[df RK, Ba: 139]

Example 4c below is repeated from above where it was cited as instantiating both Moving Ego and the Goal Oriented Activity metaphor. A

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property that 4c shares with PERSISTENCE AS CONTINUED MOTION examples like 3 and 4a is that all three examples talk about the internal structure of an event or state. In 4c, Ego is metaphorically located relative to a continuing event (the work), but Ego is also understood to be metaphorically moving forward in time.

4) c. *Xanaa nga dem ba liggéey bi jeex sa*
evidently 2.SUBJ go to.the.point.of work the be.finished your
njaatige may la diir... lu war a mat
boss give 2.OBJ time.period REL should MBA amount.to
ñaari semen.
two:PD week.
"You go to the point of the work being finished and your boss gives you a period of time that should amount to two weeks."
'You work until the work is finished, your boss gives you a period of time ... about two weeks....' (for you to go and visit your folks.)
[s XW, An:87]

Next is an example of NOW AS A MOVING ENTITY in which an arrival maps onto a change of state. The "now" in this example is decentered and it depicts a hypothetical situation in which events progress to the point of there being a drought. The state in this example is construed as a location rather than a moving entity.

4) d. *Su fekkee dafa dem ba maral...*
if become.co-located.with:ANT SFOC.3 go to.the.point.of drought
"If it finds that it has gone to the point of drought..."
'If there happens to be a drought...'
[s XW, An:71]

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In this subsection we have seen that the metaphors listed below all construe temporal experience in terms of movement from a region that maps onto an earlier time toward a region that maps onto a later time.

i) Moving Ego
ii) NOW AS A MOVING ENTITY
iii) PERSISTENCE AS CONTINUED MOTION
iv) the Goal Oriented Activity metaphor

Moving Ego and NOW AS A MOVING ENTITY differ only regarding whether the mover is Ego or some other kind of entity. In each of these two metaphors the *mover* entity is metonymically linked to "now." There is not necessarily a direct metonymic extension from one metaphor to the other, although it is possible, as suggested above, that Ego stands metonymically for Ego's location, which is a moving entity. PERSISTENCE AS CONTINUED MOTION shares with NOW AS A MOVING ENTITY the characteristic that the mover is an entity other than Ego, but in PERSISTENCE AS CONTINUED MOTION the already-traversed distance is profiled. The traversed distance maps onto the time during which state or event obtains or continues to happen. PERSISTENCE AS CONTINUED MOTION portrays the duration of an event or state rather than Ego's experiential viewpoint. PERSISTENCE AS CONTINUED MOTION and the Goal Oriented Activity metaphor are involved in expressing aspectual or aspect-like relations as well as WHEN-relations.

Moving Ego and the Goal Oriented Activity metaphor do not share submappings but they have a common correlation, as mentioned above, that regions farther in the direction of motion correspond to later times in both metaphors (cf. Sweetser forthcoming). The four metaphors are diagrammed together below to facilitate comparison.

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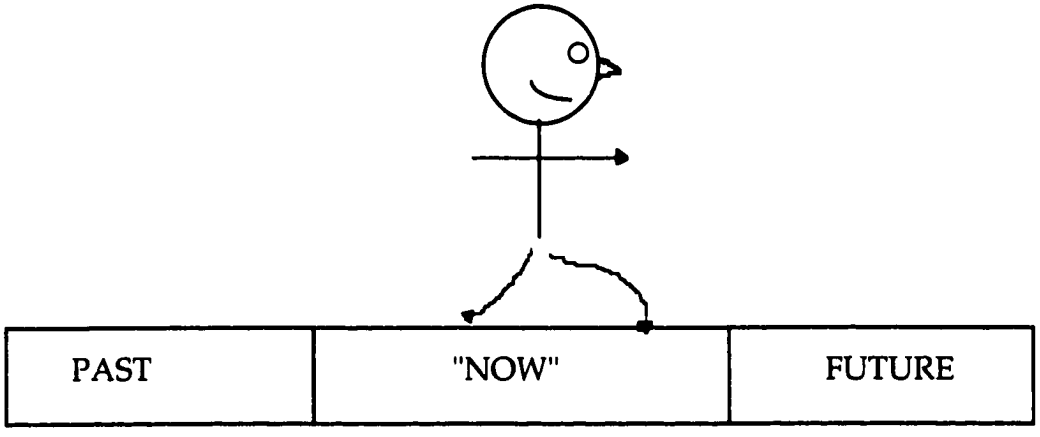
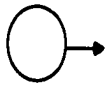


Diagram 6.5a: Moving Ego. E.g., Li ci gannaaw ... paase nañ ko. Léegi ñungi dem ci kanam. *'That which is in back, we've passed it .... Now we're going ahead.' (Section 6.3.3.1, example 5a.)*



PAST "NOW" FUTURE

Diagram 6.5b: NOW AS A MOVING ENTITY. E.g., ... Kanam la jëm *'It's heading ahead.' (Example 1d, section 6.4.1.)*



EARLIER LATER

Diagram 6.5c: PERSISTENCE AS CONTINUED MOTION. E.g., Nawet bi dem na be sori amut ndox. *'The rainy season went on for a long time without rain.' (Example 3 above.)*

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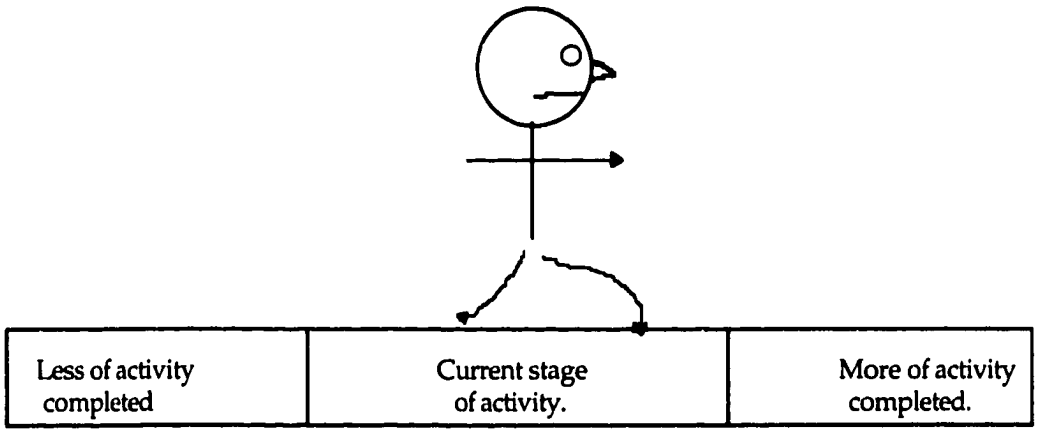


Diagram 6.5d: The Goal-Oriented Activity metaphor. E.g., ... nga dem ba liggéey bi jeex *'... you go until the work is finished.' (Example 4c above.)*

6.5. Bounded regions.

6.5.1. Bounded regions, Moving Time, and Moving Ego.

In this subsection we will look at how bounded regions are combined in metaphorical structures with Moving Time and Moving Ego. There is a strong tendency for elaborated bounded regions to involve Moving Ego. This is reminiscent of how Moving Ego and WHEN AS WHERE are combined in *tollu* expressions, and is consistent with Lakoff and Johnson's (1999) claim that metaphorical bounded regions are motivated by the Moving Ego metaphor. However, there are exceptions to the tendency.

The expressions we will look at first are very similar to Moving Time and Moving Ego expressions with *àgg* 'get to, arrive', except that they construe the goal of motion as a bounded region, using the word *dugg* 'enter'.

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dugg *'enter'*

Moving Ego:

1) a. *Bu tamxarit <bi> {paasee/weesoo/*
when Tamxarit <the> {go.beyond:ANT/go.beyond:ANT/
jàllee/wéyee} *nga duggu diggi.*
get.past:ANT/continue.on.it's.way:ANT you enter:MID[14] Diggi.
"When (the) *Tamxarit* {goes beyond/gets past/continues on its way} you enter *Diggi.*"
'When *Tamxarit* has passed, you enter *Diggi.*' (I.e., the month of *Diggi* is after the month of *Tamxarit.*)
[s XW, Xi:120]

b. *Bu tawee, ñu dugg nawet bi.*
when rain:ANT 1.PL.SUBJ enter rainy.season the
"When it has rained we enter the rainy season."
'When it rains, the rainy season begins.'
[s XW, An:56]

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Moving Time:

1) c. *Waaw léegi, dugub bi ñor na, gerte bi ñor na,*
yes now guinea.corn the ripe PERF.3 peanut the ripe PERF.3
lolli bi dugg na.
lolli the enter PERF.3
"Yes now, the guinea corn is ripe, the peanuts are ripe, *lolli* [a season] has entered."
' Yes, the guinea corn is ripe, the peanuts are ripe; it's *lolli* now.'
[sf N, 101197]

We have seen previously that in the Moving Time metaphor "now" is construed as "here." Given this interpretation, the above example explicitly construes "now" as a bounded region.

Expressions with *dugg* are among the most typical expressions in the Wolof of Tuubaa Morit (where I did fieldwork, henceforth *TM*; cf. section 1.4) for talking about the yearly cycle of months and seasons, and most temporal tokens of *dugg* are found in the context of such talk. Both Moving Ego and Moving Time are found in these contexts. However, expressions with *dugg* are not restricted to long periods of time like seasons.

Moving Ego

1) d. *Bu tàkkusaan paasee, nga dugg ngoon...*
when late.afternoon.prayertime go.beyond:ANT you enter evening.
"When the late afternoon prayertime has gone beyond, you enter evening."
'When the late afternoon prayertime has passed, then it's evening.'
[sf N, 101197]

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Moving Time

The following expression occurred as part of a description of times-of-day and their order.

e. ... *tàkkusaan* *dugg* ...
late.afternoon.prayertime enter
"the late-afternoon prayertime enters"
'It's the late-afternoon prayertime.'
[s F, 101597]

To summarize, speakers of Wolof productively use the word *dugg* 'enter' in Moving Ego and Moving Time metaphors, thereby construing times as bounded regions.

génn *'exit'*

As we saw in 1b above, conventional expressions like *Ñu dugg nawet bi* 'We enter the rainy season' construe the occurrence of a time as Ego's arrival in a region. Wolof also has a kind of conventional expression that employs the opposite notion; i.e., Ego exiting from a region. The variety of examples presented below illustrates the point, which was also made regarding *dugg* 'enter', that a time period does not have to have any particular duration to be considered a region.

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2) a. *Bu midi tegee ay minit nag génn nañ*
when noon put:ANT some minute then exit PERF.3.PL
midi fim ne ni.
noon where:3.SUBJ be.located like.this
"When noon puts on some minutes, then, we have exited noon where it is like this."
'After a few minutes, it's no longer noon right now.'
[s G, Ba:33]

b. *Samdi bii bii bii ñu génn jàpp*
Saturday REL.PROX REL.PROX REL.PROX 1.PL.SUBJ exit hold
dimaas.
Sunday
"Saturday this this this which we exited hold Sunday."
'This past Saturday towards Sunday.' (I.e., late Saturday night, almost Sunday) [att.] [d K. An:49]

c. *Weer wi ñu génn*
month REL 3.PL.SUBJ exit
"The month that we exited."
'Last month'
[AK, 121798]

Expressions with *génn* 'exit' such as the ones above are an unmarked way to talk about the most recent named weekday, week, month, or year (that is, the positional term that has occurred most recently) unless there is an overriding deictic word like *yesterday*; (cf. Fillmore 1997/1971). Though not as ordinary as *génn, jóge* 'leave, come from' occurs in similar contexts:

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2) d. *Bu ñu jóge ci noor, ñu dem ci séebéet.*
when we come.from LOCPREP dry.season we go LOCPREP séebéet
Buñ jóge ci séebéet, ñu dugg ci nawet.
when:we come.from LOCPREP séebéet we enter LOCPREP rainy.season
"When we come from the dry season we go to *séebéet* [a season]. When we come from *séebéet* we enter the rainy season."
'After the dry season, we're in *séebéet*....' (The speaker is recounting the order in which the seasons occur.) [s C, 10.15.97]

The construction in 2e below, if it were acceptable to native speakers, would be a Moving Time counterpart to Moving Ego expressions like (b) above. I have never heard such an example, and such examples are firmly rejected by AK. However, at this point I do not know of any well-motivated principles by which one could predict this nonoccurrence (since Wolof *does* have Moving Time expressions like *Samdi bii weesu* "this Saturday that has passed," i.e., 'this past Saturday.')

2) e. *?samdi bii génn...*
Saturday REL exit
"The Saturday that {went out/exited}."
Intended: 'this past Saturday.'

The data we have seen in this subsection deal with the intersection of two parameters of conceptualizing spatial experience: the phenomenon of translational motion and that of inclusion in a region. The data show that these two parameters combine as we would expect them to, given a theory of metaphorical mappings. For example, if the occurrence of a time is construed as an arrival at a place that maps onto "now," and a period of time is construed as a bounded region, then we would expect it to be possible to construe the occurrence of a time as an arrival in a bounded region. However, the existence or nonexistence of expressions based on combinations of the two

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parameters is not predictable in all cases. For example, I do not know why Ego's metaphorically "leaving" a time should be typically talked about with *génn* 'exit' rather than *jóge* 'leave, come from'; or why *génn* should participate in Moving Ego but not Moving Time.

In any case, Wolof elaborates the notion of a period of time as a bounded region more than English does. Thus, the Wolof speaker says *samdi bi ñu génn* 'the Saturday that we exited' but the English speaker would not say *?the Saturday we came out of.* There are also cases in which both languages have a particular construal, but expressions based on the construal are not stylistically equivalent in the two languages. For example, an English speaker can speak of *going into evening,* but the expression is not stylistically unmarked as is its Wolof translation (*dugg ngoon*).

Other elaborations: jaar *'go via', and* bunt *'door'*

Next are two further elaborations that follow directly from the construal of periods of time as places that can be entered or exited. The first of these, in example 3 below, makes use of the Source-Domain knowledge that one can go via a place to get to another place. Here, a Sunday is construed as part of the path via which Ego arrives at the following Sunday.

3) *Paskë dimaas lañ jaaroon, ñu jàll*
because Sunday NONSUBJ.FOC.1.PL go.via:PAST 1.PL.SUBJ get.past
dimaas ñówaat ci beneen dimaas ....
Sunday come:again LOCPREP another Sunday
"Because it's Sunday that we went by way of, we got past Sunday, came again to another Sunday..."
'We passed Sunday and came to another Sunday'; I.e., 'A Sunday has passed and it's Sunday again.' (This example is repeated from section 6.3.3.4 [17e].) [s G, Ba:86]

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The next example makes use of the Source-Domain knowledge that places on paths may have entrances.

4) a. *Yaangi ci buntu nawet yaangi*
2:PRSNTTV LOCPREP door:PD rainy.season 2:PRSNTTV
xaar taw, bu loolu paasee....
wait.for rain when DISCREF go.beyond:ANT
"You are at the door/entrance of the rainy season; you're waiting for rain. When that has passed ...."
'The rainy season is about to start. You're waiting for rain. After that ....'
[s L, Ba:103]

Following is a parallel physical use of *bunt* 'door, entrance'.

b. *Man, ci buntu dëkk bi laay*
1.EMPH LOCPREP door:PD town the 1.NONSUBJ.FOC:IMPF
nekk.
be.located
'I am located at the entrance to the town.' (The speaker's residence is located at the edge of town, by the road.)
[s L, Ba:101]

The expression *buntu nawet* 'the entrance to the rainy season' in 4a above is a fully motivated elaboration of the Moving Ego metaphor, which construes times as places relative to which Ego moves. (Cf. Lakoff 1993, Lakoff and Johnson 1999, Chapter 10.) The phrase *the entrance to the rainy season* is easily understood by the English speaker but it sounds novel or poetic. (Cf. the literary-sounding *on the threshold of winter.*[15]) By contrast, the Wolof equivalent *buntu nawet* is ordinary, at least in TM. This is another example of

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Wolof and English having similar conceptual metaphors but using them differently.

In this subsection, involving the words *dugg* 'enter', *génn* 'exit', *jaar* 'go via', and *bunt* 'door, entrance', we have seen elaborations of the basic concepts involved in Moving Ego and Moving Time mappings in Wolof. A cursory comparison of Wolof and English yields evidence that the Wolof and English languages make use of essentially the same metaphorical mappings, but in Wolof these mappings are elaborated more in stylistically unmarked contexts than they are in English.

6.5.2. Other kinds of expressions involving bounded regions.

In the previous subsection we examined expressions that are structured by a straightforward combination of Moving Time or Moving Ego with construals of times as bounded regions. In this subsection we will look at a wider variety of metaphorical bounded regions. In 5a below, the speaker was speaking as if the current time were after dusk. F*ii* 'here' in this example specifically signifies the imagined time of speech.

5) a. *Fii ba diis-ëer ci guddi, yaa xam.*
here to.the.point.of ten-o'clock LOCPREP night SUBJ.FOC.2 know
"Here until ten o'clock at night, you're the one who knows."
'Anytime between now and ten o'clock at night.'
(The speaker is explaining when the prayertime called *gee* is.)
[DFS, A]

In 5a above, the speaker construes the time period that starts at a fictive "now" and ends at ten o'clock as a region. This construal is compatible with the understanding that Ego will start at a place corresponding to "now" and metaphorically go to a place corresponding to ten o'clock. The speaker says

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that any place within this region is as good as another for performing the *gee* prayer.

In the next example *fii* 'here' means 'now' but the speaker is using the idea of *now* to set up an arbitrary RP from which to measure a year's time. I.e., the speaker says "between now and next year" in order to convey the idea of 'for a year'.

5) b. *Xam nga su fekkee ku xam ne*
know PERF.2 if become.co-located:ANT who know that
du am njël diggante fii ak déwén moom
IMPF:NEG have expenses between here with next.year 3.EMPH
lañu wax faqir.
NONSUBJ.FOC.3.PL say poor.person
"You know if it finds that someone who it is known that she doesn't have expenses between here and next year, her they call *faqir*" [poor person]. 'The person who doesn't have money for expenses throughout the year is called a *faqir*.' (What the speaker is doing is defining the word *faqir*.)
[att.] [s T, Xi:40]

The next example serves as a motion/location counterpart of both 5a and 5b above.

c. *Fii {ba/ak} ayropoor ñaata*
here {to.the.point.of/with} airport how.many
kilomet la?
kilometers NONSUBJ.FOC.3
"Here {to the point of/with} the airport, how many kilometers is it?"
'How many kilometers is it from here to the airport?'
[AK, Lu:3]

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The constructions in 5a and 5b each establish two temporal RPs (one of which is the present) and construe the time period that starts at the first RP and ends at the second as a bounded region. This concept of a bounded region is encoded with the word *diggante*[16] '(space in) between' in 5b and in 6 below. This conceptualization seems to depend on the notion of a moving Ego who traverses the bounded region.

6) a. *Xanaa* *diggante* *siis-ëer* *ba* *dëes-ëer-é-kaar*
evidently between six-o'clock to.the.point.of two-fifteen
mën *nga* *fi* *liggéey.*
be.able PERF.2 UL work
"Evidently between six o'clock until quarter after two you can work there."
'There is obviously time between six o'clock and quarter after two in which work can be done.'
[s T]

Like the examples in 5a-b, the example in 6a treats a time period as a bounded region. In addition to having the spatial property of distance, this time period is also construed as a location at which something can be done. The temporal use of *diggante* in Wolof is similar to the temporal use of *between* in English.

In the next example, *nawet* 'the rainy season', is construed as containing another region, *oxsat*, which is its middle. The notion 'middle' is expressed with the word *digg* which is the root on which the word *diggante* 'between' is based.

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6) b. ... *Li* *ñuy* *wax oxsat;foofu* *mooy*
REL 3.PL.SUBJ:IMPF say oxsat DISCREF SUBJ.FOC.3:AUX
diggi *nawet.*
middle:PD rainy.season
"What they call *oxsat;* there's the middle of the rainy season." (*Oxsat* is a season.)
'... that's the middle of the rainy season.'
[s XW, An:59]

This use of *digg* is similar to temporal uses of the English word *middle*, as seen in the English translation of the above example. In the example we also see, not surprisingly, that the spatial possibility of having a place within a place maps onto temporal experience.

As we would expect, it is possible for Ego to be located at the middle of a time period, as in the following example.

6) c. *Ñungi* *tolloon*
1.PL:PRSNTTV be.equivalent:PAST
ci *diggi* *nawet.*
LOCPREP middle:PD rainy.season
"We were at a point equivalent to the middle of the rainy season."
'We were in the middle of the rainy season.' 'It was the middle of the rainy season.'
[AK, 021899]

Next is a Source-Domain example in which the speaker explains the meaning of the word *digg* 'middle'.

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6) d. *Soo demee ba nga xam ne fim*
if.you go:ANT to.the.point.of 2.SUBJ know that where:3.SUBJ
ne ni — dëkk bi — dem nga ba am miliyë
be.located like.this town the go PERF.2 to.the.point.of have middle
nga xam ne boo ko xaajoon yaangi ci
2.SUBJ know that if.you 3.OBJ divide:PAST 2:PRSNTTV LOCPREP
miliyë bi, kooku mooy diggi dëkk bi.
middle the DISCREF SUBJ.FOC:AUX middle:PD town the
"When you go as far as, you know, right now — the town — you've gone as far as having middle, you know, if you divided it in two, you're at the middle, that's *diggi dëkk bi* [the middle of the town]."
'If you go to the *miliyë* of the town; that is, if you go half way through it, you're in the *miliyë*, that is *the middle of the town*.' (The speaker was defining *diggi dëkk bi* 'the middle of the town'.)
[s L, Ba:102]

In the above example, the speaker uses the word *xaaj* 'divide in two' in explaining the meaning of *digg* 'middle'. The presence of Ego in the middle of the town is regarded as dividing the town into two parts: the part traversed and the part not yet traversed. *Xaaj* 'divide in two' also has temporal uses, as in the following examples.

7) a. *Nawet baangi soog a xaaj.*
rainy.season the:PRSNTTV just MBA divide
"The rainy season was just half way gone."
'It was just the middle of the rainy season.'
[AK]

7b below is a physical example that corresponds to 7a above.

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7) b. *Mburu mi xaaj na.*
bread the divide PERF.3
"The bread has divided" [into two parts].
'The bread is half way gone.'
[AK, 030499]

When *xaaj* is used as a stative verb to refer to physical situations as in 7b above, expendable resources tend to be involved. *Xaaj* can also be used as a noun meaning 'middle', as in the next example.

7) c. *xaaju nawet.*
divide:PD rainy.season
'the middle of nawet.' (I.e., the half-way point.)
[AK, 021899]

Digg 'middle' and *xaaj* '(be) divide(d) in two' are also used with the causative suffix *-al* as in the following example.

d. *weer wi ñuy waaj a*
month REL 3.PL.SUBJ:IMPF about.to MBA
{digg-al/xaaj-al}
{middle-CAUSE/divide-CAUS}[17]
"the month we are about to make divide"
'the month that we are about to get to the middle of'; 'the month which is half way over.' (i.e., 'this month')
[AK, 121798]

There do not appear to be verbal uses of *digg* without the *-al* suffix. The following motion/location example with *diggal* meaning 'reach the half-way point' suggests a Moving Ego motivation for the expression in 7d above.

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7) e. *Boo demee ba jot Puut*
when.you go:ANT to.the.point.of reach Puut
ngay soog a digg-al (yoon wi).
2.SUBJ just MBA have.middle-CAUS (way the)
"When you have gone to the point of reaching Puut, you are just then making the way have a middle."
'When you reach Puut, you're half way.' (Context: This is a trip from Dakar to Thiès.) [AK]

In addition to specifically temporal uses, contexts in which *xaajal* is used to talk about a task are typical, as in the next example. (Cf. Lakoff and Johnson 1980.)

7) f. *Xaajal naa sama liggéey.*
divide:CAUS PERF.1 my work
"I've made the task be half gone."
'I'm half way through my work.'
[AK]

In uses of *xaajal* that involve physical substances, the substances tend to be resources, as in the following example. (Cf. 7b above.)

g. *Xaajal naa mburu mi.*
divide:CAUS PERF.1 bread the
"I made the bread have two parts."
'I {used up/disposed of} half of the bread.'

Example 7g suggests a possible motivation for 7f in which the work is construed as a metaphorical substance that gets used up. This construal is compatible with theories of aspect that treat the completion of an event as

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involving using up a resource (Chang, Gildea, and Narayanan 1998; Herskovits, manuscript). Compare also Lakoff and Johnson's (1980) account in which doing work involves using up a metaphorical resource.

In 8a below, the time talked about is said to be *ci biir* 'inside' the metaphorical region defined by previously mentioned endpoints. This is similar to examples we have seen in this section with *diggante* 'between' (such as 5b and 6a) in which the speaker names two endpoints and then refers to the time between them. Whereas examples such as 5b and 6a above suggest that the metaphorical region coded by *diggante* involves a path which is traversed by a moving Ego, examples such as 8a (and 10 below) do not suggest a Moving Ego account.

8) a. *Bu fekkee boobu paase na, bu*
if become.co-located DISCREF go.beyond PERF.3 when
tisbaar jotee ... am na beneen
early.afternoon.prayertime reach:ANT ... have PERF.3 another
julli ci biir, ñu ko wax faaynaange.
prayertime inside 3.PL.SUBJ 3.OBJ say faaynaange
"If that has passed, when the early-afternoon prayertime reaches/obtains ... there is another prayertime inside; they call it *faaynaange*." (I.e., *faaynaange* is within the time period that is after a previously mentioned RP, referred to as *boobu* 'that' [discourse referential], and before the early afternoon prayertime.)
[s F, 101597]

We have just examined two Wolof relational concepts that correspond to the concepts expressed by the English prepositions *between* and *inside*. Let us now look at how verbs that denote properties of places are applied to temporal concepts. These properties are denoted by so-called *stative* verbs in

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Wolof that would be translated with adjectives in English. An example is *yaatu* ' be spacious':

9) *Xam nga midi yaatuwul ....*
know PERF.2 noon be.spacious:NEG
"You know that noon is not spacious."
'Noon doesn't last long, you know.'
[s G, Ba:32]

Temporal uses of *yaatu* 'be spacious' are interesting because *yaatu* denotes a space with more than one dimension, and temporal terms that construe times as places are typically one dimensional. The notion of temporal spaciousness probably has to with a conceptualization of times as places in which things can be done, as we saw in the case of *diggante* 'between' above (example 6a).

The sequential or durational properties of temporal experience have been emphasized in most previous treatments of times as places (though see Traugott 1978). This has involved an emphasis on linear spatial arrangements. We are now seeing other facets of spatial experience that are relevant. Construals of time periods as spacious have an aspectual character in that the construals have to do with time periods and events which potentially metaphorically "occupy" them. Recall Comrie's (1985:6) characterization of aspect as having to do with *internal temporal constituency.*

Below are further aspect-like examples of times construed as places whose size restricts what can be done in them. The first of these involves *xaj* 'fit in', which is used to construe an action as something that fits within a period of time. Strictly speaking, the notion of *fitting* does not require more than one dimension, but probably most everyday physical situations that are talked about with *xaj* 'fit in' involve more than one dimension; cf. 10b below.

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10) a. *Saxaar ñówagul, jëndi limonaat xaj na fi.*
train come:yet:NEG buy:AND soda fit.in PERF.3 here
"The train hasn't come yet; going to buy soda fits in here."
'The train hasn't come yet; there's time to buy a soda.'
[Fal, Santos, and Doneux 1990:249 under *xaj*]

b. *Armoor bi xajul ci bunt bi.*
wardrobe the fit.in:NEG LOCPREP door the
'The wardrobe won't fit through the door.'
[Fal, Santos, and Doneux 1990:249 under *xaj*]

Note that in 10a above a time is treated as a place by means of the word *fi* 'here', but this place is not a path that Ego metaphorically moves over. Like 10a, example 10c construes a time as a place whose dimensions constrain what can be done in it. This place maps onto a time whose internal constituency affects what can be done during that time. Such a construal is expressed in 10c with *xat* 'narrow, tight'. Here the idea is since the Friday prayers take a lot of time, there is not much "room" for other activities on Friday.

10) c. *Tey la àjjuma, day xat.*
today NONSUBJ.FOC.3 Friday SFOC.3:IMPF tight
"It's today Friday; it's tight."
'Today is Friday [therefore] it's busy.'
[d K, Xi:73]

In a sense, *xat* is the opposite of *yaatu* 'spacious', as exemplified below.

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10) d. *Samay dàll dañoo xat.*
my:PL shoes SFOC.3.PL tight
'My shoes are tight.'
[Fal, Santos, and Doneux 1990 under *xat*]

The conceptualizations in the above examples seem normal from the English-speaking point of view. We say things like *I'll try to fit that into my schedule*, which is similar to 10a, and *Friday is tight*, meaning that there's not much spare time on that day. Examples like these are interesting in that they use notions of physical extent to talk about time as a resource (cf. Lakoff and Johnson 1980, 1999). The expressions we have just seen probably involve the following sort of metaphor: The duration of an activity is construed as taking up space, and the time period during which an activity occurs is construed as a place that has to be large enough to accommodate the activity. These construals of times as places which constrain the activities that can be done at them are a potential motivation for other cases in which events are metaphorically located at times.

Turning back to our focus on the qualities of metaphorical temporal regions, the speaker in the next example treats the notions *yaatu* 'be spacious' (two- or three-dimensional) and *gudd* 'be long' (one-dimensional) as equivalent in their temporal denotations.

11) a. *Ketrë-v~e-diis-wiit dafa yaatu ... paskë*
nineteen-ninety-eight SFOC.3 be.spacious ... because
ane dafa guddu.
year SFOC.3 be.long.MID
"Nineteen ninety-eight is spacious .... because a year is long."
(The speaker is saying that a lot can happen in a year because a year is a long time.) [att.] [d B, Xi:131 (Dakar; native speaker of Fula.)]

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In the next example *gàtt* 'short' and *yaatu* 'be spacious' are given as opposites. The speaker is saying that all the prayertimes are long except for the one at dusk.

11) b. *Yépp yaatu na — benn rekk moo gàtt: ... timis.*
all be.spacious PERF.3 — one only SUBJ.FOC.3 be.short ... dusk
"They are all spacious — only one is short: ... dusk."
'They are all long ....'
[s L, Ba:105]

We have seen that Wolof uses the words *gudd* 'long' and *gàtt* 'short' with the same kinds of temporal meaning as English uses the corresponding glosses. But the status of *gudd* 'long' as a temporal term in Wolof is very different from that of *long* in English. In English it is difficult to talk about the notion of a long time without using a metaphorical concept like *length* or *extension*. Wolof, by contrast, has a simple monomorphemic word dedicated to the expression of the concept of a long time. The word is *yàgg* 'be a long time',[18] a nonmetaphorical temporal term with no spatial uses. The etymology of *yàgg* is not known. It is exemplified below.

12) a. *Mbaa dinga yàgg fii <bon> ci yoon bi?*
Q FUT.2 be.long.time here <then> LOCPREP time this
'Are you going to be here for long this time? (I.e., 'on this visit.')
[att.] [s L, Ba:91]

The next example shows a nominalization of the verb.

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12) b. *...Yàggaayam* *daal.*
be.long.time:GEN AFF
'... That is, its duration' [i.e., the length of the rainy period.]
[d K, An:62]

The next example contrasts *yàgg* 'be a long time' with *gàtt* 'be short'.

c. *... dund gu yàgg ... [vs.] dund gu gàtt xanaa.*
life REL be.long.time life REL be.short evidently
"... a long life as opposed to a short life I suppose."
[d K, Xi:80]

The existence of a nonmetaphorical term like *yàgg* 'be a long time' alerts us to the fact that it is not conceptually necessary to talk about time in terms of space, despite the intuitions that a native speaker of English may have. It is also interesting to note that the example of *yàgg* runs counter to the erroneous stereotype that European languages are well suited for talking about abstractions while indigenous languages of Africa and the Americas resort to metaphor (cf. Whorf 1956).

Nonetheless, it is clear that in both Wolof and English the language of space is indispensable for talking about time. It is revealing that *gàtt* 'be short' is used as the opposite of *yàgg*. Where there is no uniquely temporal term, Wolof uses a term of one-dimensional extension in space to denote the temporal concept.

In this section we have seen that concepts of bounded regions are used extensively to talk about temporal experience in ways that preserve inferences arising in spatial experiences and interactions. In some cases mappings from bounded regions onto time periods involve aspect-like concepts instead of, or in addition to, WHEN-relations. For example, *Jëndi limonaat xaj na fi* "going to

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buy soda fits in here" (example 10a above) has to do with the relationship between an event and a time period during which it can occur, rather than the sequential relationship of a time or event relative to a RP in a framework, which would be more like tense. In some cases, places map onto times in a way that is compatible with an account involving the Moving Ego metaphor. Other mappings, which treat times as places within which activities can be done, are distinct from Moving Ego.

6.6. Orientation in an independently established reference frame.

So far in this chapter, we have studied two major ways of encoding WHEN-relations. The first way is to locate a static figure with respect to a static *place*, where the figure maps onto a time or event and the reference place maps onto a time. In this strategy, conceptualizers have knowledge of when the reference time (e.g. a season) occurs in a sequence; this knowledge is not dependent on the metaphorical expression in question. The second way of encoding WHEN-relations involves a motion scenario in which there is a relative change of location involving the figure and RP — these are Moving Ego and Ego-centered Moving Time metaphors. Both of these metaphorical strategies allow the encoding of aspectual as well as WHEN-relations. A third way of encoding WHEN-relations was discussed in Chapter 3 — the FRONT/BACK Moving Time metaphor. We will now explore a version of FRONT/BACK Moving Time that occurs in Wolof, and then we will examine a metaphor that has a very different grounding experience but is instantiated in expressions that have virtually the same semantics as certain FRONT/BACK Moving Time expressions. The comparison of these two metaphors yields important insights on what makes a good grounding experience for a temporal metaphor.

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6.6.1. Preceding and following.

The FRONT/BACK Moving Time metaphor is not instantiated at all in Wolof with the word *kanam* 'front', as we have seen. And the word *gannaaw* 'back' participates only marginally if at all. The FRONT/BACK Moving Time metaphor is instantiated in Wolof with the words *jiitu*[19] 'go ahead of' and *topp* 'follow'. (We encountered this pair of words in Chapter 4.) FRONT/BACK Moving Time expressions with *jiitu* 'go ahead of' and *topp* 'follow' are exemplified below.

1) a. *Yëg a jiitu yëgle.*
find.out 3.SUBJ.FOC go.ahead announce
'Finding out precedes announcing.' (Proverb.)
[Cissé, Guèye, and Touré 1982:9]

b. *Yëglee topp (ci) yëg*
announce:3.SUBJ.FOC follow (LOCPREP) find.out
'Announcing follows finding out.'
[AK]

We saw the mapping for FRONT/BACK Moving Time in section 3.3. In this metaphor, two entities that are moving in the same direction map onto an earlier and a later time, respectively. The metaphor is depicted in the diagram below.

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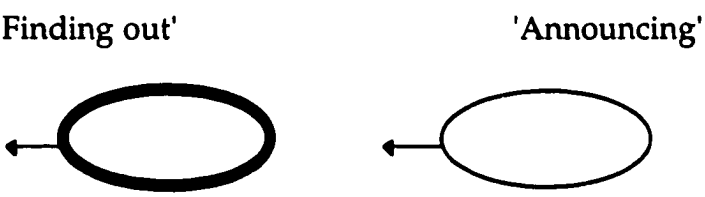


Diagram 6.6: FRONT/BACK *Moving Time. Example:* Yëg a jiitu yëgle 'Finding out precedes announcing' *(= example 1a above).*

As we will see, *topp* is remarkably similar to its English translation equivalent, *follow*. The English opposite of temporal *follow* is *precede*, which is not primarily a verb of motion.[20] Wolof *jiitu* translates *precede* and additionally has motion senses that are analogous (but opposite) to those of *topp* 'follow'.

As an example of how similar *topp* is to *follow*, consider 2 below. All consultants agree with this judgment, and I have not observed any spontaneous uses that contradict it. The example shows exactly what we saw in the case of English *follow* in section 3.1 (example 2). That is, *topp*, like *follow*, cannot be used to establish the moment of speech as a RP, but can take as RP some point or period of time already introduced into the discourse.[21]

2) *Ñeenti semen yii di ñów/?topp, dinaa jàpp*
four:PD weeks these AUX come/follow FUT.1 be.busy
lool. Yii ci topp dinaa gën a féex.
very these LOCPREP follow FUT.1 more MBA free
"I'm going to be very busy in the four coming/?following weeks. I'll be more free in those that follow." [df RK, JTDOC:7.]

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Below are further examples of *topp* 'follow' and *jiitu* 'go ahead of' in temporal uses. These sentences further exemplify the similarity of *topp* to English *follow*. We see that the RP of *jiitu* or *topp* may be virtually any kind of point or period in time. Thus, a construal of times as occurring in sequence is enough to motivate the use of *jiitu* or *topp* — no particular viewpoint is necessarily assumed, and there is no particular tendency towards deictic or discourse grounding.

A further general fact about FRONT/BACK Moving Time expressions is that they do not refer to the internal temporal constituency (aspect) of the times or events that are in sequence. This is predictable from the Source-Domain semantics in which the internal constituency of the entities involved in the GO AHEAD OF or FOLLOW relation is not relevant to that relation. Moreover, the GO-AHEAD-OF/FOLLOW relation does not involve entities interacting with regions.

The RP is a season

3) a. *Noor moo topp ci tereet.*
dry.season 3.SUBJ.FOC follow LOCPREP trading.season
'The dry season follows the trading season.'
[s L JTDOC:7]

b. *Lolli moo jiitu tereet.*
lolli 3.SUBJ.FOC go.ahead.of trading.season
'*Lolli* precedes the trading season' (*Lolli* is a season.)
[s L, 122397]

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The RP is the generic category 'day'

c. *Guddi mooy jiitu bëccëg ba*
night 3.SUBJ.FOC:IMPF go.ahead.of day the.DIST
'Night precedes day.'
[att.] [s Z, Xi:104]

The RP is a day that is associated with an event

d. *Mooy bis bi jiitu bi*
3.SUBJ.FOC:AUX day REL go.ahead.of REL
ñu dem Kawlax.
3.PL.SUBJ go Kaolack
'That's the day that preceded the day we went to Kaolack.'
[att.] [d K, Lu:149]

The RP is an event

e. *... Balaa boobu, li jiitu loolu dana*
before DISCREF REL go.ahead.of DISCREF FUT.3
fekk yow nga faru sa dugub.
become.co-located.with 2.EMPH 2.SUBJ plant your guinea.corn
'Before that, what precedes that, you will have planted your guinea corn.' [s XW, An:67].

In Chapter 3 we discussed evidence from English and Japanese that the FRONT/BACK Moving Time metaphor is experientially grounded by scenarios in which position on a path correlates with sequence. This grounding is equally plausible in the case of *jiitu* 'go ahead of' and *topp* 'follow' in Wolof. Below are examples with *jiitu* in which a figure was ahead of its RP on a path

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and also arrived at a goal first. This scenario involves a combined simultaneous interpretation in which the Source-Domain concept of position on path and the Target-Domain concept of sequence are both present. (Cf, *Pat got to the office ahead of Kim*, section 3.3.)

4) a. *Ñoo ma jiitu*
3.PL.SUBJ.FOC 1.OBJ go.ahead.of
'They went ahead of me.'
[att.] [s RO, JTDOC, p6.]

In the context in which the above example occurred, RO and his friends all appeared in town on the same day. The example occurred in response to questioning as to whether they had traveled and arrived together. In the example RO says that his friends had gone ahead of him, which implies that they arrived in town first.

The next example was attested in the same context, said by one of RO's friends who had gone ahead of him. I include the example in order to confirm that this scenario is construed the same way from either point of view.

4) b. *Ñoo ko jiitu.*
1.PL.SUBJ.FOC 3.OBJ go.ahead.of
'We went ahead of him'
[att.] [d K, JTDOC, p6.]

The above examples are a clear case in which position on path implicates order of arrival. The next example also involves a combined simultaneous interpretation, but in this case what is being focused on is more clearly the goal of motion rather than the path.

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4) c. *Bu ma jiitu ci sama mbojj.*
HORT.NEG 1.OBJ go.ahead.of LOCPREP my grain.milling
"Don't get to my grain-milling ahead of me."
'Don't beat me to the punch' (Folk saying) [Cissé, Guèye, and Touré 1982:100]

What the saying means is "Don't do what is appropriate for me to do before I do." Thus, the saying invokes a motion-on-path scenario in order to talk about sequence. The next example makes essentially the same point, but comes from ordinary conversation. The example comes from a narration about the founding of a town.

4) d. *Am na ñoo fi jiitu bon dangay bàyyi.*
have PERF.3 3.PL.SUBJ here go.ahead so SFOC.2:IMPF leave
"There are those people who went ahead here, so leave it alone."
'There are people who got here first so leave it alone.'
[att.] [s T, An:41]

The speaker of the above example was talking about a tradition according to which a person tied a cloth onto a tree in order to say 'There is someone who got here first so leave it alone' as a way of making claim to an area in which he wished to found a community. A similar example of experiential correlation between position on path and sequence with *topp* 'follow' comes from the same narrative. (The speaker quotes a character in the narrative):

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4) e. *Nga dem ... bu subaa dinaa topp sa kow.*
2.SUBJ go when tomorrow:ANT FUT.1 follow your top
"You go ... when it's tomorrow I'll follow [on] your top."
'Go ahead ... I'll follow you tomorrow.'
(In sentences like this, the phrase *topp sa kow* is understood to be equivalent to *topp ci/si sa kow*, where *ci/si* is the locative preposition.[22] The verticality in this example will be discussed below.)
[att.] [s T, An:39]

The examples we have seen show that there is a straightforward mapping between *position on path* and *sequence* that has a clear experiential grounding and can be expressed by *jiitu* or *topp* expressions as well as FRONT/BACK expressions like the ones we saw in Chapter 3.

6.6.2. A metaphor of "putting on": another independent reference frame.

Next we will discuss cases where verticality is involved in *topp* expressions, and this will lead to a discussion of a metaphor for sequence whose grounding experience involves putting things *on* other things. Verticality is thus implicated, but it is not a central aspect of the metaphor's structure.

While temporal expressions that exploit the front/back axis are common in the world's languages (Haspelmath 1997, Svorou 1988, 1994; Traugott 1978), the vertical dimension is used to a much lesser extent. However, temporal expressions exploiting verticality are found in Mandarin Chinese (Traugott 1975, Yu 1998), where they are somewhat productive. (See also Shinohara 1999 on Japanese.) It should be noted that Mandarin *also* has FRONT/BACK Moving Time expressions. Here is an example of a temporal expression from Mandarin that employs verticality.

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Mandarin

5) *shang-ban-tian*
upper-half-day
'morning; forenoon' [Yu 1998:110]

Let us now look at how the vertical dimension is involved in Wolof temporal expressions. In our discussion of *topp* 'follow' above, we saw the expression *topp sa kow* 'follow on your top'. The example is repeated below.

6) a. *Nga dem ... bu subaa dinaa topp sa kow.*
2.SUBJ go when tomorrow:ANT FUT.1 follow your top
"You go ... when it's tomorrow I'll follow [on] your top."
'Go ahead ... I'll follow you tomorrow.'
[att.] [s T, An:39]

Topp ci kow, literally 'follow on top' is a collocation meaning 'follow after'. This use of *kow* is exemplified again below, showing the equivalence *kow* 'top' and *gannaaw* 'back' in this context.[23]

6) b. *Janq bi daa jiitu; ñu topp ci*
girl the SFOC.3 go.ahead 3.PL.SUBJ follow LOCPREP
({moom/kowam/gannaawam}).
3.EMPH/top:GEN/back:GEN
'The girl went ahead; they followed ({her/behind her}).'

This collocation with *topp* and *kow* also occurs in metaphorical expressions, such as the one presented next.

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c. *Biram moo topp si kow Fode Siise.*
Biram 3.SUBJ.FOC follow LOCPREP top Fode Siise
"Biram is the one who follows on top of Fode Siise."
'Biram comes after Fode Siise.' (I.e., Biram follows Fode in birth order.)
[att.] [sf N, An:131]

In the next example, the physical *following* relationship is talked about with the middle form of the verb *teg* 'put (down/on)'. *Teg* is associated with verticality because when you "*teg*" something somewhere you put it *on* something which is *under* it. Temporal expressions involving the lexeme *teg* are the focus of the discussion in this section.

6) d. *Day am ku jiitu, am ku tegu ci gannaaw.*
SFOC.3 have who go.ahead have who put.on:MID LOCPREP back
'There's the person who goes ahead and the person who is next.'
[AK, 031594]

A later-on-top metaphor that may be somewhat similar to what is found in Wolof appears in English. However, whereas Wolof temporal expressions involving *teg* are unmarked in contexts where sequence is at issue, their English counterparts require a context that involves additional motivation for using the metaphor (Lakoff i.p.c.). For example, when we talk about one thing *following on top of* another, as in the next example, the thing that comes on top is felt to be burdensome (cf. the metaphor DIFFICULTIES AS BURDENS). The *on top* expression also emphasizes immediacy of succession, and seems to present the event referred to as an addition to previously mentioned events.

- *Her transmission trouble followed right on top of her engine trouble.*

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An example of temporal *on top* from the San Francisco Chronicle is presented below.

> - *That decision comes on top of a plan to boost the federal tobacco tax by 55 cents a pack ....* [022199]

Returning to Wolof *tegu/tege* 'be put (down/on), be next in sequence', example 7 below shows a purely temporal use of *tegu*, in which it is equivalent to *topp* 'follow'. Impressionistically, the sort of temporal relation seen in 7 is most frequently expressed with *tegu*. Both *tegu* and *topp* are ordinary (i.e., unmarked) in temporal usage.

7) *Bis bu njëkk bi mooy altine;*
day REL be.first the 3.SUBJ.FOC:AUX Monday
bi ci {tegu/topp} — talaata.
REL LOCPREP {put:MID/follow} Tuesday
"The first day is Monday, the one that {is put on/follows at} it — Tuesday."
'The first day [of the week] is Monday; the next day is Tuesday.'

Before looking further at extended uses of *tegu/tege*, let us look at some Source-Domain expressions. In physical uses, *teg* involves putting something *on* something else.[24] Other kinds of actions that we would refer to with *put* in English, such as putting something in a bowl or putting something in your pocket, are not translated with *teg* but rather with *def* 'do, put'.

8) a. *Teg naa ko.*
put PERF.1 3.OBJ
'I put it down.' [Munro and Gaye 1991:127][25]

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8) b. *Teg naa téere bi ci kaw taabal bi.*
put PERF.1 book the LOCPREP top table the
'I put the book on the table.'
(*Kaw* and *kow* are variants of the same lexeme, 'top'.)
[Munro and Gaye 1991:127]

Example 8b above illustrates the fact that acts of *teg* — i.e. 'putting' -- typically involve putting something *ci kaw* — i.e. 'on top of' — something else. But it should be noted that what is crucial in the semantics of *teg* has to do more with *contiguity and support* than verticality. (This is reminiscent of the English preposition *on* [Bennett 1975, Herskovits 1986]). An example of contiguity and support without verticality involves the derived verb *tegle* which means 'to stack', but also has the specific meaning 'to have on many layers of clothing' (Munro and Gaye 1997:187).

I will propose that the metaphor that structures the use of *teg* to talk about sequence is one in which entities in a sequence are construed as items *added* one by one to a collection by being put on each other. Below is an example of how *teg* is used to talk about addition.

9) a. *Amoon na fukki ganaar. Teg na ci fukk.*
have:PAST PERF.3 ten.PD chicken put PERF.3 LOCPREP ten
Léegi am na ñaar-fukk.
now have PERF.3 twenty
"She used to have ten chickens. She put ten on it. Now she has twenty."
'She used to have ten chickens. She added ten (to them)....'
[AK, 121198]

In the above example, addition is metaphorically construed as the addition of objects to a pile. This sort of structure has been explored

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extensively by Lakoff and Núñez (e.g. 1998), who claim that mathematical ideas are grounded in everyday experience. One of the many metaphors they have discovered for English is very similar to what is found in Wolof. This English metaphor is ADDITION IS PUTTING COLLECTIONS TOGETHER WITH OTHER COLLECTIONS TO FORM LARGER COLLECTIONS. Cf. THE UNIT [ONE] IS THE SMALLEST COLLECTION), Lakoff and Núñez (1998:223) .

Next is exemplified the kind of addition that is most directly relevant to the conceptualization of sequence — counting one by one.

9) b. *Bu ñuy wañ benn benn, boo ne* benn,
when 3.SUBJ:IMPF count one one when.you say one
ñaar a ci tegu. Boo ne ñaar, ñett *a*
two SUBJ.FOC LOCPREP put:MID when.you say two three SUBJ.FOC
ci tegu.
LOCPREP put:MID.
"When they count one by one, when you say *one, two* is put on it.
When you say *two, three* is put on it."
'When they count by ones, when you say one, two is next. When you say two, three is next' [et cetera].
[AK, 121198]

The temporal metaphor that employs *tegu* construes SEQUENTIAL OCCURRENCE AS PLACEMENT OF AN OBJECT ON ANOTHER. The mapping is given below.

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Table 6.6: Mapping for SEQUENTIAL OCCURRENCE AS PLACEMENT OF AN OBJECT ON ANOTHER.

SOURCE		TARGET
Stationary item (RP).	→	Event or time in a sequence (RP).
Item (figure) put on the RP.	→	Event or time (figure) subsequent to the RP.
Location on the RP.	→	Occurrence subsequent to the RP.

The grounding for this metaphor is an experience in which the sequence in which items are added to a collection is understood in terms of the placement of later-added items on ones that were added earlier. An example of how *teg* 'put' can be used in such a scenario is given below.

10) a. *Keebaa da doon tegle ay téereem ci*
Keebaa SFOC.3 AUX.PAST stack ART.PL book:GEN LOCPREP
taabal ji. Aawo Bi la njëkk a taaj, teg Buur
table the Aawo Bi NONSUBJ.FOC.3 be.first MBA put.down put Buur
Tilleen ci kowam, teg ci Njaaxum.
Tilleen LOCPREP top:GEN put LOCPREP Njaaxum.
'Keebaa was piling up his books on the table. He put Aawo Bi down first, put Buur Tilleen on top of it, put Njaaxum on that.'
[AK, 121198]

Example 10b below talks about the same (invented) scenario as 10a above. Two things are notable in 10b. First, the form of *teg* involved is the suffixed form *tegu* 'be put on', the same form that is common in temporal expressions. Second, *tegu* is framed in opposition to the lexeme *jiitu* 'go ahead of', whose temporal uses we examined above.

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10) b. Q: *Naka la téere yi tegaloo?*
how NONSUBJ.FOC.3 book the.PL be.stacked
'How are the books stacked?'

A: *Aawo Bi moo jiitu, Njaaxum tegu ci.*
Aawo Bi 3.SUBJ.FOC go.ahead Njaaxum put:MID LOCPREP
"*Aawo Bi* goes ahead; *Njaaxum* is put on it."
'*Aawo Bi* is first; *Njaaxum* is next.'
[AK, 021899]

The form *tege* is used with pretty much the same meaning as *tegu* in temporal examples like the ones we saw above. The suffix *-e* indicates an alteration in the valence structure of the verb; in this case the agent role of *teg* 'put on' is not expressed.

11) a. *Paska dafa am tangoor wa xam ne bu ko defee*
because SFOC.3 have heat REL know that when 3.OBJ do:ANT
rekk dangay ba xel ne léegi ndox moo
only SFOC.2:IMPF leave mind that now water 3.SUBJ.FOC
ci war a tege ....
LOCPREP should MBA put:VAL
"Because there is heat which it is known that if it is done only, you leave mind that now water ought to be put on it."
'Because there is heat such that you know that rain ought to follow it.'
[s XW, An:71]

b. K: *Setumbaar mooy* [K trails of and XW cuts in:]
setumbaar 3.SUBJ.FOC:IMPF
"*Setumbaar* it is [trails off]"

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XW: *Mooy* *ci* *tege*

3.SUBJ.FOC:AUX LOCPREP put.VAL

"It is the one that is put on it." 'It's the next one' (I.e., it is the next month or season after the one that had just been mentioned.)

[d K, s XW; An:60]

The mapping in Table 6.6 above is also consistent with expressions such as the one given below, which are not paraphrasable with *topp* 'follow'.

11) c. *Bu* *midi* *tegee* *ay* *minit* *nag* *génn* *nañ*

when noon put:ANT some minute then exit PERF.3.PL

midi *fim* *ne* *ni.*

noon where:3.SUBJ be.located like.this

"When noon puts on some minutes, then, we have exited noon where it is like this."

'After a few minutes, it's no longer noon right now.'

[s G, Ba:33]

The Source-Domain relationship of contiguity and support provides the motivation for a metaphor in which a *later* time is construed as an object that is *put on* another object. This implicates a vertical relationship in which the item that was put down *later* is the one that is higher. According to this account, it is only as part of a scene of "putting on" that verticality is relevant in Wolof temporal metaphors.

Recall (from the beginning of this section [6.6.2]) that in Mandarin, it is the higher position maps onto an *earlier* time (cf. example 5). This is opposite to the way verticality is involved in Wolof. Kazuko Shinohara (1999) and The Berkeley Metaphor Group (i.p.c. 1995) have independently suggested that the Chinese type vertical metaphor (which also appears in Japanese) is motivated by the pervasiveness of downward movement by natural phenomena such as flowing water. In this scenario, an entity (for example water in a stream, or

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something floating in a stream), is at higher locations at earlier stages of the journey and lower locations at later stages. Hence the correlation between HIGHER and EARLIER.

Another plausible motivation is that ancestors are associated with earlier times and also metaphorically with higher locations (Berkeley Metaphor Group i.p.c. 1995.) According to this hypothesis, the metaphor STATUS AS UP, together with the high status given to ancestors, is what establishes a correlation between HIGHER and EARLIER. Neither motivation would preclude the possibility of the other.

Both proposed motivations for the Mandarin metaphor are very different from the motivation we have just seen for Wolof in which EARLIER is correlated with UNDERNEATH. The Mandarin and Wolof metaphors appear to involve verticality for very different reasons. Thus, the appearance of verticality in temporal expressions, in and of itself, is not especially significant. It is the particular metaphorical mappings and experiential correlations that are crucial.

By the same token, the experiential groundings of the metaphors instantiated by *tegu/tege* '(be) put' and *topp* 'follow', though superficially very different, have much in common that is relevant to temporal experience. Both grounding scenarios involve correlations between positions and times, and these correlations are salient regardless of what point of view the scenario is observed from. Thus we see that two very different scenarios yield virtually the same experiential correlation with respect to this particular temporal metaphor. Moreover, *motion* per se in the FRONT/BACK Moving Time metaphor does not directly map onto anything (although motion is responsible for change of position). This is a further contrast with Ego-centered Moving Time in which the increasing proximity of the figural object to Ego's location maps onto the increasing immanence of a time. Thus, a single kind of experience — the experience of entities in motion — can be involved in very different experiential correlations. To summarize, scenarios

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that seem very different may yield the same experiential correlation (e.g. between position and sequence), and scenarios that seem very similar (e.g. of objects in motion) may motivate very different mappings.

6.7. Relationships between experiences of motion/location and temporal concepts.

Let us now explore some generalizations based on what we have studied in this chapter. We will look further into how certain *experiential gestalts* (section 2.2; Lakoff and Johnson 1980 Chapter 15) that are grounded in physical scenarios play a role in structuring temporal scenarios. Crucially, the spatial grounding scenarios of temporal metaphors have important informational and temporal components. We will also see how metaphors that are incompatible with each other can nonetheless work together to structure an utterance through conceptual integration (Fauconnier and Turner 1997, 1998). The section ends with a discussion of what licenses relative movement between Figure and RP in a temporal metaphor. We will begin by looking at some cases of dual figure-ground organization.

6.7.1. Dual figure-ground organization

Moving Ego expressions in which Ego is the RP involve two levels of figure-ground organization. (This observation indicates another reason why Moving Ego and Moving Time cannot be figure-ground reversals of each other.[26]) When I speak of a *level* of figure-ground organization, I just mean a particular framing or construal of a type of scene. The two levels of figure-ground organization involved in Moving Ego are not a property of the metaphor *per se*. Rather, they are a property of the physical experience in which the metaphor is grounded. It is not unusual for physical experience to involve more than one level of figure-ground organization. For example

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Langacker (1987:122) notes that "Hierarchies of figure/ground organization in a single domain are ... commonplace."

The experiences that are relevant to the current discussion are experiences of space and motion which can be described with literal uses of words like *ahead* in English or its translation *ci kanam* in Wolof. Imagine for example that Ego is walking along and says *There is a restaurant ahead.*



Diagram 6.7: "There's a restaurant ahead": The level of figure-ground organization in physical experience at which the restaurant is figure and Ego's location is RP.

In spite of the fact that Ego is moving and the restaurant is stationary, there is a level of organization at which Ego is the RP and the restaurant is the figure, as represented in Diagram 6.7 above. Ego is analyzed as RP because it is the location of the restaurant which is in question relative to Ego's location. Note that *There's a restaurant ahead* is a way of locating a restaurant, not a way of locating the speaker.

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[Figure]

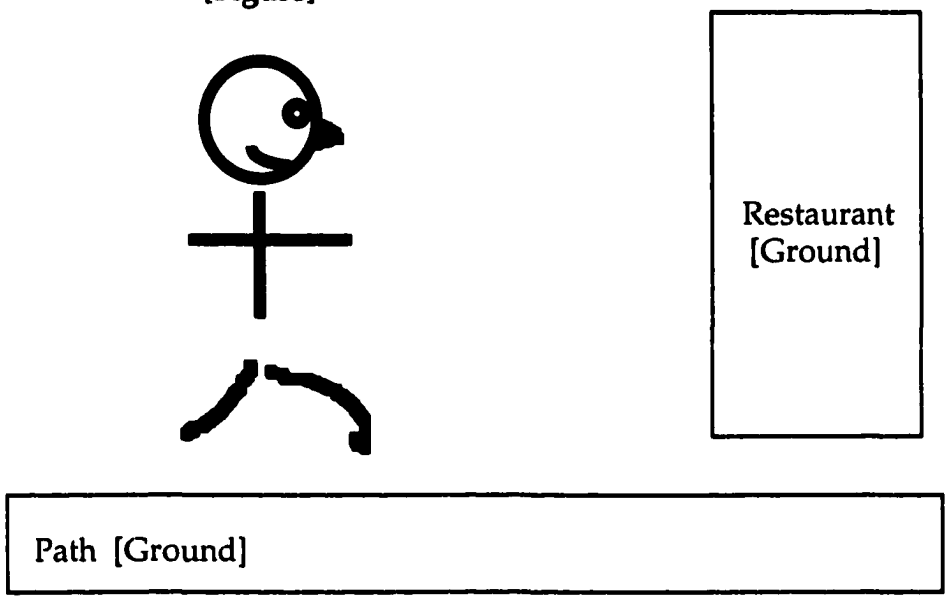


Diagram 6.8: "There's a restaurant ahead" — The level of figure-ground organization at which Ego is figural relative to the framework in which she is moving.

At the same time, it is part of the meaning of *ahead* that Ego is construed as a mover and thus figural with respect to the path of movement and other elements relative to which she is moving or potentially moving, as in Diagram 6.8 above. It is important to note that we can impose two contrasting figure-ground schemas on the same physical experience at the same time with no apparent cognitive effort or feeling of dissonance.

A metaphorical expression like *I hope to see you in the weeks ahead* has two levels of figure-ground organization that correspond to those of the grounding experience, as we would expect. First, Ego's "now" is the RP relative to which the WHEN-relation of *the weeks ahead* is understood (metaphorically as location in time). At this level, the figure-ground organization is the same as that involved in Moving Time expressions like *the coming weeks*. At the second level, Ego is construed as moving or potentially moving, and thus figural, relative to the weeks that the expression

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metaphorically construes as locations. At this level, the figure-ground organization of Moving Ego is the reverse of that of Moving Time, as Lakoff (1993) and Lakoff and Johnson (1999) have observed.

Another simple scenario of movement which has dual figure-ground organization is the grounding scenario of the FRONT/BACK Moving Time metaphor, which we examined in section 6.6.1. In an example like *Fido followed Harry down the road*, at one level of figure-ground organization, Harry is the RP and Fido is the figure, as in the diagram below.



Diagram 6.9: The figure-ground framing of Fido followed Harry *in which Fido is the figure.*

In the other framing, both Harry and Fido are figural insofar as they are moving relative to some background. This is diagrammed below. In the diagram, the heavy rectangle is meant to suggest a construal by which Harry and Fido taken together are treated as figural, ignoring the figure-ground relation that obtains between them. The light rectangle at the bottom represents the background against which Harry and Fido are moving.

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[Figure]

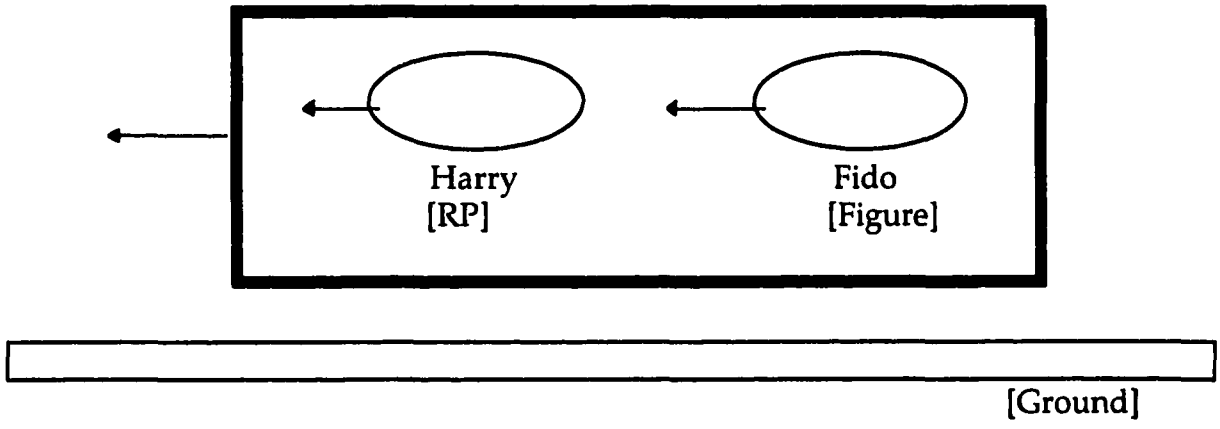


Diagram 6.10: The framing in which both entities in the follow *relation are figural relative to the background against which they are moving.*

Thus in the grounding experience, the two designated entities (e.g., Harry and Fido) do not change position relative to each other, but this static relationship is profiled in a frame of reference in which the two entities are moving. The Target-Domain situation is analogous, in that the sequential relationship between the designated entities is understood to not change (McTaggart 1993/1927), but the occurrence of the entities (times or events) themselves involves change relative to some assumed background. Thus the sentence *A buffet followed the talk* predicates an unchanging sequential relationship between the buffet and the talk. For example the buffet may have begun twenty minutes after the talk ended and that temporal relationship does not change. However there is an assumed background of temporal change — there was a time at which the talk had not happened yet, then the talk happened, then the talk was over, etc.

To summarize, we have seen two cases in which an ordinary scene of physical motion involves two levels of figure-ground organization. In both

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cases, the metaphors that are based on these scenes project two levels of figure-ground organization onto the Target-Domain scenarios.

6.7.1.1. Fekk *'become co-located with' and dual figure-ground organization.*

The case of *fekk* 'become co-located with' involves a more complicated mapping of dual figure-ground structure, in which there is an apparent discrepancy in figure-ground structure between Source-Domain and Target-Domain uses. The solution to the problem involves looking at the informational and temporal figure-ground structure in the grounding scenario. We studied *fekk* in sections 2.4 - 2.7 using examples like the following.

1) a. *Binta fekk na*
Binta become.co-located.with PERF.3
bool ba ca waañ wa
bowl the.DIST LOCPREP.DIST kitchen the.DIST
"Binta became co-located with the bowl in the kitchen." 'Binta "found" the bowl in the kitchen.' 'The bowl was in the kitchen when Binta got there.'

b. *Midi fekk na*
Noon become.co-located.with PERF.3
bool ba ca waañ wa
bowl the.DIST LOCPREP.DIST kitchen the.DIST
"Noon became co-located with the bowl in the kitchen." 'Noon found the bowl in the kitchen.' 'The bowl was in the kitchen at noon.'

The only formal difference between 1a and 1b above is that the subject of 1a is a person (Binta) and the subject of 1b is a time (noon). The syntactic figure-ground organization of the two sentences is the same.

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We saw in section 2.4 that physical uses of *fekk* denote a motion event in which a mover arrives at a location. Physical *fekk* predications assert that an entity (e.g., the bowl in 1a) was at the location when the mover arrived there. With respect to this motion event the mover is figural, both because it moves and because its location is determined relative to the goal location.

This motion event is mapped onto a temporal event in which a time (e.g., 'noon' in 1b) is figural in the sense that it is a metaphorical mover and a focus of attention. Informationally, however, it is noon that is the RP in 1b -- noon is the known time relative to which the time that the bowl was in the kitchen is determined. Example 1c below shows that the metaphorical-mover (subject) argument of *fekk* may serve as an informational RP even when it is not a conventionally pre-established time such as 'noon'.

1) c. *Deewu jarbaatam fekku ko fi*
death:PD nephew:GEN become.co-located.with:NEG 3.OBJ here
waaye fi la ko suul bi fekk.
but here NONSUBJ.FOC.3 3.OBJ burial the become.co-located.with
"The death of her nephew didn't 'find' her here, but here is where the burial 'found' her."
'She wasn't here for the death of her nephew, but she was here for the burial.' [Fal, Santos, and Doneux 1990 under *suul b-*]

Now let us look at Talmy's (1978) definition of figure and ground as preparation to a discussion of how the *fekk* predication of the grounding scenario motivates the Target-Domain uses of *fekk*.

> The Figure object is a moving or *conceptually* mov*able* point whose path or site is conceived as a variable the particular value of which is the salient issue.
>
> The ground object is a reference-point, having a stationary setting within a reference-frame, with respect to which the Figure's path or site receives characterization [p. 627, original emphasis].

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We have seen that in physical-motion/location uses, the mover participant (e.g. Binta) in the *fekk* predication is a moving point as in Talmy's definition. It is also appropriate to regard the state of the object's being located in the goal location (e.g. the bowl in the kitchen) as a "variable the particular value of which is the salient issue." Source-Domain *fekk* expressions say that this state of being located obtained *at the time that* the mover arrived (cf. section 2.6). Thus, the time of arrival is an *informational* RP in Source-Domain uses of *fekk* just as the metaphorical mover is a RP in metaphorical uses.

To summarize what we have just seen, there are two levels of figure-ground structure involved in scenarios described by physical-motion/location uses of *fekk*. One level has to do with the physical relations between the entities in the scenario — an entity arrives at a place where a state obtains. At this level the mover is the figure and the place (with its stationary occupants) is the ground. The other level has to do with temporal and informational relationships between entities/events in the scenario — a state obtains when a person or thing arrives. At this level, the state that obtains at the goal location is the figure, and the time of the arrival is the ground.

Analogously, there are two levels of figure-ground organization in the Target-Domain scenario. In the figure-ground relationship that corresponds to the physical relations between entities in the grounding scenario, the arrival of an object at a place maps onto the occurrence of a time. Here, the time is figural (section 2.4, Table 2.4). In the figure-ground relationship that corresponds to the information-structure component of the grounding scenario, the state is the figure, and the time (e.g. 'noon') is the RP relative to which the conceptualizer understands when the state obtained.

Metaphorical uses of *fekk* are motivated by the way temporal relations are manifested in a physical situation-type, and the way people exploit this situation-type with nonmetaphorical language in order to convey information about temporal relations. The physical grounding scenario is an experiential gestalt in the sense of Lakoff and Johnson (1980) that includes

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salient physical, temporal, and informational dimensions. (Cf. Grady 1997a, Grady and Johnson 1997 on *primary scenes*.)

Another ramification of this analysis involves the notion of *temporal location*, which is fundamental to the way linguists discuss temporal phenomena. The ubiquity of the timeline in linguistic discussions attests to the importance of this notion. (cf. Bull 1971/1960, Jackendoff 1983, Langacker 1991, Reichenbach 1947, Talmy 1978.) According to the notion of temporal location, events and states are located *at* points or *in* intervals of time (cf. Vlach 1993). Compare Comrie's (1985:9) definition of *tense* as "...grammaticalized expression of *location in* time" [my emphasis]. *Fekk* predications are incompatible with this notion because they construe times as entities which become co-located with states somewhere. The incompatibility of *fekk* predications with the notion of temporal location points to the complexity of space-time homology in human cognition (cf. Talmy 1988).

The observation that there is no single space-time homology was made by Lakoff (1993) and Lakoff and Johnson (1980, 1999) with regard to Moving Time and Moving Ego. Lakoff and Johnson have observed that times may be construed as moving objects relative to Ego's "now" which is construed as stable, or times may be construed as locations relative to which Ego moves (cf. section 3.1 and references there; section 6.3). Essentially, as Lakoff and Johnson note, this is a figure-ground reversal of a single locative relationship. In one formulation, a positional term is construed as an object at a location — *e.g. Christmas is here* — and the location ("here") maps onto "now". In the other formulation the positional term corresponds to the location and the located entity corresponds to "now" — e.g., *We are in summer*. In both cases a temporal RP is metaphorically construed as a location.

By contrast, *fekk* predications do not determine a WHEN-relation by metaphorically locating an entity at a place that corresponds to a time; nor do English *setting subject* constructions (Baker 1999, Langacker 1991), such as *Noon found Harry in the kitchen*. In English setting-subject constructions,

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and Wolof *fekk* constructions as we have just seen, the RP of the WHEN-relation is not construed as a location. There is no sense in which the event or state whose time is determined is metaphorically located *at* a time. Thus, the conceptual strategy of determining WHEN-relations that is employed in setting-subject or *fekk* predications is fundamentally different from the standardly assumed notion of "temporal location" employed in Moving Ego, and Ego-centered Moving Time.

6.7.2. Conceptualizations involving more than one predicator with temporal significance.

In his discussion of the phrase in 2 below, Lakoff (1993) claims that "...it is possible for two different parts of a sentence to make use of two distinct metaphorical mappings at once."

2) *within the coming weeks*

According to Lakoff, the use of *within* in 2 instantiates the Landscape (Moving Observer/Ego) metaphor, and the use of *coming* instantiates the Moving Time metaphor. As Lakoff notes, these two metaphors are incompatible with each other in the sense that they cannot be combined into a single mapping. According to Lakoff, 2 is okay because it makes use of only partial mappings from the inconsistent metaphors. The same argument could be made about a sentence like *A long time passed* — that the subject employs the Landscape metaphor and the verb employs Moving Time. Lakoff and Johnson provide the basic reasoning that would be involved in such and argument:

> "Since time [according to the Moving Ego construal] is a path on the ground the observer [i.e., 'Ego'] moves over, it has extension and can be measured. Hence an amount of time can be *long* or short. An extent of time can also be bounded; therefore, one can

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perform an action *within* an allotted time" (1999:146 [emphasis, and material in square brackets, added]).

In order to know whether different parts of 2 use different metaphorical mappings, we would have to know for sure whether a Moving Ego/Observer metaphor is involved in phrases like *A long time passed* or *within the coming weeks*. As I have argued above (section 6.2.1), phrases that denote entities with physical extent are not necessarily evidence of a moving ego/observer.

But in certain cases which are similar to 2 but which involve more than one clause, it is clear that a single conceptualization may be structured by more than one metaphor. An example is given below. The speaker is explaining when a particular time of day called *tàkku-nàkku* occurs.

3) *...[Tàkkusaan paase na], [timis jotagul];*
late.afternoon.prayertime go.beyond PERF.3 dusk reach:yet:NEG
diggante boobu.
interval DISCREF
"*Tàkkusaan* has passed, dusk hasn't reached yet — that interval." (The interval of time referred to is when *tàkku-nàkku* occurs.)
[s C, 101597]

The first two clauses (which are bracketed) in example 3 above characterize a particular temporal scenario in consistent spatial terms, using the Moving Time metaphor. The next noun phrase, *diggante boobu* 'that space in between', builds on this conceptualization, but with a different metaphor, which construes a period of time as a place. Though not impossible, it would be odd in an experience of physical motion/location to apply the spatial meaning of *diggante boobu* 'that space in between' to the space in between two moving things as depicted in the first two clauses, one of which has passed and the other of which has not arrived yet. It is hard to

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imagine a physical context in which this would make sense, but it makes perfect sense in the temporal context in which it occurs. In this and other cases it is clear that Lakoff's basic insight is correct: distinct, even incompatible, mappings combine in concept formation. In the case at hand it is the temporal experience that dictates how the metaphors combine. That is, in order to talk about certain kinds of temporal experience speakers choose components of different spatial experiences and put them together appropriately. This "putting together" is an instance of what Fauconnier and Turner (1994, 1997, 1998) call *conceptual integration* or *blending*. (Cf. Fauconnier 1997; Grady 1997a, section 7.3; Grady, Oakley, and Coulson 1999.)

Another example will help illustrate the idea further. In the example below, the speaker presents opposite figure-ground construals of the same phenomenon. It is hard to imagine anyone presenting such a juxtaposition in order to convey a spatial concept, but the juxtaposition is actually quite effective in reinforcing the temporal concept that the speaker is expressing.

4) *Ñungi ci tã bi daal. Agsi na daal.*
3.PL:PRSNTTV LOCPREP time the AFF arrive PERF.3 AFF
"We're at the time. It has arrived."
[s G, Ba:43]

Blending involves *mental spaces* (Fauconnier 1994/1985), which are "small conceptual packets constructed as we think and talk, for purposes of local understanding and action" (Fauconnier and Turner 1997:8). Mental spaces are elaborated for particular discourse needs, and it is at the local discourse level that the concepts constructed with mental spaces cohere (Fauconnier and Sweetser 1996). A description of conceptual metaphor in blending theory would go as follows (Grady, Oakley, and Coulson 1999): The Source-Domain concepts are in one mental space, the Target-Domain concepts are in another mental space, and material is projected from both of

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these spaces to the blend, which represents the metaphorical understanding; for example, the understanding of a time as a place.

Thus, in blending theory, WHEN AS WHERE is a blend, and Ego-centered Moving Time is a blend. In G's construction of the concept in 4, he composes a third blend, to which WHEN AS WHERE and Ego-centered Moving Time are inputs. In this blend G construes "now" as both a location he occupies and as an entity that has arrived.

To summarize, in forming temporal concepts speakers sometimes combine spatial concepts in ways in which those concepts would not be combined in a conceptualization of space. The essential mappings involved in these combinations are instances of conceptual metaphor as we have understood it throughout the dissertation, but the way these metaphorical concepts are integrated involves blending in the sense of Fauconnier and Turner (1997, 1998). This contrasts with the case of the combination of WHEN AS WHERE with Moving Ego, as in Table 6.3 (in section 6.3.4), in which the Source-Domain concepts involved in the two metaphors are part of the same kind of spatial experience-type, that of being located at a place. For example, in both WHEN AS WHERE and Moving Ego, Ego is (potentially) construed as being located at a place which maps onto a time.

6.7.3. Construing temporal phenomena in terms of relative movement between the figure and the RP.

It is fine to say *Christmas is getting closer* or *Christmas follows Thanksgiving*, but it would be bizarre in many contexts to say *Christmas is getting closer to Thanksgiving*. What accounts for this contrast? *Christmas is getting closer*, of course, means that *Christmas* is getting closer to "now," and the metaphorical position of "now" changes with respect to that of other times. By contrast, two points on a calendar like *Thanksgiving* and *Christmas* do not change position relative to each other because they do not involve the

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notion "now". From this it might seem that relative movement of figure and RP occurs only when one of the terms involves a person's experience of the present; i.e., is deictically anchored.

Actually, as was suggested by Sarah Taub (i.p.c.),[27] the generalization in terms of deictic anchoring is a special case of a broader generalization: Whenever there is more than one temporal framework involved in a conceptualization, an entity within one framework can be conceived of as moving with respect to an entity within the other. The contrast between the "now"-based framework and a framework based on temporal cycles (such as the contrast in *Christmas is coming*) is the contrast most commonly encountered, but it is also possible for different calendrical systems to be involved in a single conceptualization. This is exemplified below.

5) *From 1990 to 1998, the first day of Ramadan got closer to Christmas every year.*

In the above example, the first day of Ramadan and Christmas change position relative to each other because of the way the lunar and solar calendars relate to each other. The same principle is responsible for the use of *génn* 'exit' in the Wolof example below. (Cf. discussions of *génn* in section 6.5.1.) The occurrence of Ramadan is determined by a lunar calendar, whereas dry season and wet season, like Christmas, are determined in a solar framework. In the example, the speaker is talking about how Ramadan occurs at different times in different years.

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6) ... *Léegi dafay* *génn* *nawet* *bi. Fim* *ne*
now SFOC.3:IMPF exit rainy.season the where:3.SUBJ be.located
ni *mungee* *génn* *nawet* *bi* *dafay*
like.this 3:PRSNTTV:IMPF exit rainy.season the SFOC.3:IMPF
gën *di* *ñów* *nag* *ci* *biir* *noor.*
more IMPF come then LOCPREP inside dry.season
"Now it [Ramadan] is exiting the rainy season. At this point it's exiting the rainy season. It's coming more in the dry season now."
'Each time Ramadan occurs it is farther from the rainy season and farther inside the dry season.'
[s XW, 92697]

In the example, the (solar) seasonal cycle is treated as the ground relative to which successive instances of (the lunar month) Ramadan occur, where different times of occurrence are construed as entities located at different places. Successive occurrence at different places is then construed as movement, and the seasons themselves are construed as bounded regions. The metaphor involved here is not Moving Time or Moving Ego, but rather an elaborated version of WHEN AS WHERE. (Cf. Matsumoto 1996, Sweetser 1996, 1997; Talmy 1988, 1996, on *subjective change* or *fictive change*; also cf. *fictive motion*.) Expressions such as this are further evidence that Moving Ego is not necessarily involved in conceptualizations of times as places.

6.8. Summary and conclusions.

6.8.1. Summary

In this chapter we have made a survey of metaphors in Wolof that map concepts involving movement and location onto temporal concepts. The survey was broad but not exhaustive. We started by examining

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expressions of static temporal location like *It rained in the night*. While this type of expression is widely noted and seems simple, the question of exactly what metaphorical structure underlies this expression-type is complex. I proposed a metaphor WHEN AS WHERE and claimed that it is grounded in the same kind of experience as ACTIVITIES AS LOCATIONS, which apparently motivates progressive constructions in many languages. There are two versions of WHEN AS WHERE: Ego-centered and Other-centered.

We then turned to the question of Ego-centered motion metaphors. We found some interesting differences between Wolof and English, particularly involving verbs of "passing." Additionally, it turns out that Moving Ego shares some important properties with Event Structure metaphors; that is, with metaphors which have to do with events, states, and activities. There is an important distinction between metaphors that encode WHEN-relations (which are tenselike) and those that encode aspect-like concepts.

The FRONT/BACK Moving Time metaphor is instantiated robustly in Wolof — not with words for 'front' or 'back' but with the words *jiitu* 'go ahead of' and *topp* 'follow'. We discovered a metaphor of 'putting' in Wolof with a sequential meaning virtually identical to that of *topp* 'follow'. Because the grounding experience of this metaphor does not involve autonomous translational motion, the metaphor has interesting implications for what makes some experience-types more suitable than others as experiential groundings for metaphor. The metaphor of 'putting' constitutes a fourth type of Other-centered temporal metaphor in addition to the FRONT/BACK Moving Time metaphor, the version of Moving Time instantiated by *fekk* 'become co-located with' expressions, and the Other-centered version of WHEN AS WHERE.

In the final section we considered questions of figure-ground organization and other general constraints involved in mapping concepts that emerge from experiences of movement/location onto temporal concepts. We found that the notion of conceptual integration (Fauconnier and Turner 1997, 1998) is needed in the description of some metaphorical expressions.

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6.8.2. *Conclusions*

There is a great degree of systematicity in Wolof metaphors for time and a lot of similarity with English. The systematicity is evidence for the conceptual as opposed to merely linguistic nature of the metaphors that underlie the various expressions. The similarity with English is suggestive evidence in favor of the existence of pan-human experience types that would make it possible for speakers of any language in any culture to share certain concepts. This study provides crosslinguistic perspective on meaning and language of the sort that is necessary if there is to be progress in semantic theories that will be valid for all languages. (Cf. Jackendoff 1983, 1990; Lakoff 1987, Langacker 1987, 1991.)

Many of the differences between Wolof and English metaphorical expressions can be described in terms of different degrees of elaboration of the same or a similar underlying metaphor. Many differences have to do with style and markedness. At this point, however, there is a lack of explanation in some cases for the variation in the degree to which metaphors get elaborated. Nonetheless, conceptual metaphor theory allows us to make interesting generalizations on structure in the lexicon.

As we acknowledge the conceptual nature of conceptual metaphors, we also have to pay attention to the important role played by the words and constructions metaphors are encoded in. Temporal expressions with *fekk* 'become co-located with' contribute striking exemplification of this importance. We have also seen in connection with *fekk* that the notion of *temporal location* is not always valid as a way of describing how people conceptualize *when* an event happens or a state obtains.

In this chapter we have been concerned with discovering what it is about spatially grounded experiences that is involved in talking and thinking about temporal experience (cf. Sweetser 1990). Thus we have paid special attention to the experiential correlations in which Source-Domain and

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Target-Domain concepts are linked (Grady 1997a, Grady and C. Johnson 1997, C. Johnson 1999a,b; Lakoff and Johnson 1980, 1999). In the case of *fekk* 'become co-located with', for example, temporal and informational relationships play an important role in the grounding scenario that structures the Moving Time metaphor. Thus, the experiences that motivate temporal metaphor take place *in* space but they crucially involve nonspatial concepts, e.g. temporal concepts.

Metonymy, a way of directly exploiting experiential correlations for communicative purposes, often plays an important role in motivating metaphors (Grady 1999b, Kövecses and Radden 1998, Sweetser i.p.c; cf. C. Johnson 1999a). A crucial component of all the conceptual structure we have discovered is figure-ground organization (Talmy 1978, Whorf 1956) . In cases of multiple figure-ground organization, there is no one-to-one correspondence between that organization and generalizations about Moving Ego and Moving Time.

There is one Wolof predicator of major importance for talking about temporal experience which we have not examined yet. That is the verb *jot* 'reach', which appears in expressions like *Ñaari waxtu jot na* 'It's two o'clock'. This lexeme and the theoretical and descriptive challenges which it offers will occupy us in the next chapter.

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Notes.

[1] The compound preposition *ci biir* "LOCPREP stomach" codes the concept 'inside' (cf. Robert 1997).
[2] According to Lakoff and Johnson (1999:178), there are "two fundamental [Event Structure] metaphors" rather than "two kinds of Event Structure metaphor," as I put it. (See Grady 1997a Chapter 4).
[3] Haspelmath 1997 does not use a controlled sample of languages.
[4] The first word of this example, *boo*, is glossed 'if.you'; it could equally well be glossed 'when.you'. This same ambiguity obtains with *soo* and all of the *bu/su* forms in all persons.
[5] There is nothing unusual about the fact that Wolof has borrowed a word from French to use with a meaning already covered by a Wolof word. For example, the word *meer* has been borrowed from French with the same meaning as the native Wolof *yaay* 'mother'.
[6] *Weesu* is morphologically a *middle* form, what Kemmer (1993:56-7) calls a *translational motion* middle. The unsuffixed form *wees* also occurs; (see Fal, Santos, and Doneux 1990). The middle suffix is *-u;* (see Fal, Santos, and Doneux 1990; Ka 1981).
[7] The code *DFS* indicates that the data was collected in rural Bawol, north of Dakar in Senegal.
[8] *Àgg* has the variants *yegg* and *egg*. When combined with the ventive suffix *-si,* it appears as *agsi*. (*Agsi* is morphologically irregular.)
[9] That group includes most of the scholars cited throughout this dissertation.
[10] *Tollu* is apparently middle-marked with the suffix *-u*.
[11] Technically, this is *unification* as found in construction grammar and discussed for metaphor by Grady 1997a.
[12] PERSISTENCE AS CONTINUED MOTION belongs to the *object* branch of the Event Structure metaphor as discussed in Lakoff and Johnson 1999.
[13] The hammer is also assumed to continue to be in my possession and continue to be functional, but I will ignore these issues for simplicity's sake.
[14] In contexts such as this, there appears to be free variation between *dugg* 'enter' and the middle-suffixed form *duggu*. This is reminiscent of the case of *weesu* 'go beyond' and *wees* mentioned in note 6.
[15] I believe this phrase is from *The Hobbit* by J.R.R. Tolkien.
[16] *Diggante* is derived from the root *digg* 'middle' which is apparently related to *ndigg* 'waist, lower back'; cf. Robert 1997.
[17] The observant reader will have noticed that I don't know how to gloss the root *digg* 'middle' as it appears in 7d suffixed with *-al*. A good guess would be 'have a middle'.
[18] *Yàgg* can be used to refer to a short time in certain constructions, but its unmarked meaning seems to be the 'long time' one.
[19] *Jiitu* is marked with the middle suffix *-u*, although there is no corresponding unsuffixed verb "*jiit*." See Kemmer 1993 on middle marking and note 6 on *weesu* 'go beyond'. Like *weesu, jiitu* is a translational motion middle.
[20] Though, of course, the etymological source of *precede* involves a motion verb.
[21] French and Spanish translations of *follow* can, however, be used to establish the moment of speech as RP, so we know that the constraint is not universal. (Thanks to Ben Bergen for pointing this out for French.)
[22] The locative preposition *ci/ca* has the free or idiolectal variant *si/sa*. In environments where this preposition would occur adjacent to the pronoun *sa* 'your', one of the two (probably the preposition) is sometimes omitted. Thus the phrase *topp sa kow* is understood to mean *topp si/sa sa kow* "follow at your top" i.e., 'follow behind you'.
[23] Bernd Heine (1995:129) has found three languages in which the spatial concepts ON and BACK are both expressed by the same body-part term. It is worth noting that this correspondence is possible, but in the case of Wolof the correlation of the concepts TOP and BACK is relevant only to expressions of sequence. There does not seem to be any general correspondence in Wolof between TOP or ON and BACK.

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[24] *Teg* also has a use in which it means 'put away'. It seems to me that when something gets put away in rural Wolof culture, one of the ordinary places to put it is *on* something; e.g., on a surface such as the floor of a house.

[25] I have altered the Wolof spelling in the examples taken from Munro and Gaye 1991 and 1997 so that the spelling conforms to the conventions used in this dissertation.

[26] It also shows that Grady's (1997a:50) statement of why Moving Ego and Ego-centered Moving Time cannot be unified into a single metaphor needs to be refined. Grady states that "... a metaphorical moving object/[figure] cannot simultaneously be understood as a ground, with respect to the same motion event." I think the correct generalization is that the object cannot be simultaneously understood as a figure and a ground with respect to the same ground.

[27] The discussion that produced this observation also included Collin Baker, Joe Grady, and Christopher Johnson. Thanks to Collin Baker for calling it to my attention that entities in different calendar systems can move relative to each other.

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7

The verb *jot*:
Reaching, arriving, fitting, catching, and the occurrence of a time

7. 1. Introduction.

In this chapter we will study the verb *jot* 'reach'. Expressions with *jot* constitute an unmarked way in Wolof to talk about the occurrence of a time, and tokens of temporal *jot* occur frequently. The most common ways to talk about the time of day employ *jot*, as in 1 below.

1) *Jot na de^. Tisibaar jot na.*
reach PERF.3 EMPH early.afternoon.prayertime reach PERF.3
"It has reached. Tisbaar has reached."
'It's tisbaar.' [about 2:15 p.m.]
(Said upon hearing the call to prayer.)
[att.] [Xi:17]

It is not surprising that a verb meaning 'reach' would come to be used to talk about the occurrence of a time, presumably by means of the Ego-centered Moving Time metaphor. But it is not at all obvious why *jot* 'reach' should play such a major role in Wolof temporal usage. It turns out that a simple Moving Time mapping is not fully adequate to describe *jot*'s temporal semantics. Rather, a wide range of senses — reaching, arriving, fitting, catching — are potentially relevant. This chapter is about that range of physical senses and how they all contribute to temporal meaning. The first part of the chapter will proceed by comparing *jot* with the by now familiar verb *ñów* 'come'.

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7.2. *Jot* and *ñów.*

For the sake of review, a physical motion example of *ñów* is given in 2a below. Then in 2b is exemplified the 'reach' use of *jot* that denotes something done with the arm and hand in which the body as a whole does not go anywhere. In 2c is a translational motion use that is more closely related to the Moving Time uses.

2) a. *Bukki ñów na, gaynde ñów na, mbaam-hàll ñów na ....*
hyena come PERF.3 lion come PERF.3 wild.boar come PERF.3
'Hyena has come, lion has come, wild boar has come ....' (The various contestants have arrived for a wrestling match.)
[s C, 1015]

b. *Jotuma ko.*
reach:NEG:1 3.OBJ
'I can't reach it.' (A child cannot reach a branch of a tree.)
[att.] [s AM]

c. *Boo demee ba jot Puut ....*
when.you go:ANT to.the.point.of reach Puut
"When you have gone to the point of reaching Puut ...." "When you go and reach Puut...."
'When you reach Puut....' (This is repeated from section 6.5.2 [7e]. *Puut* is a town.)
[AK]

Jot, like *ñów*, is analyzed as instantiating the Ego-centered Moving Time metaphor. In many contexts, *jot* and *ñów* are interchangeable as in 3.

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3) *Bu weerukoor jote e/ñówee —*
when Ramadan reach:ANT/come:ANT
benn la.
one NONSUBJ.FOC.3
'When Ramadan reaches/comes — it's the same.' (That is, the *jot* version and the *ñów* version both mean the same thing, something like 'when Ramadan comes'; i.e., "when the current month is Ramadan.")
[s T, Xi:92]

The following example shows another kind of expression in which *jot* and *ñów* are interchangeable.

4) *Tisbaar jot/ñów na.*
early.afternoon.prayertime reach/come PERF.3
"Tisbaar has reached/come."
'It's Tisbaar' or 'Tisbaar has come'.
[s T, Xi:96]

Now that we have seen examples of how *jot* 'reach' and *ñów* 'come' can be used to talk about the same state of affairs, we turn to the question of how they are different.

7.2.1. How jot *and* ñów *are different.*

7.2.1.1. The aspectual contrast in the imperfective presentative.

In elicitation, I was able to find only two types of situation in which *jot* is acceptable and *ñów* is not or vice versa. The first involves an aspectual contrast having to do with the imperfective presentative conjugation. This

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conjugation, which is very similar semantically to the English progressive, is familiar from our investigations of the Ego-centered Moving Time metaphor (see the examples in 5 below; cf. Chapter 2).

The aspectual contrast can be characterized in the typology of Vendler (1967) and Dowty (1979) in the following terms. The English translations of *jot* and *ñów* — *reach* and *come* — show an analogous contrast to the one found in Wolof: *Ñów* 'come' is an accomplishment verb and *jot* 'reach' is an achievement. That is, to use physical examples from English, *coming* (or *ñ ó w* in the imperfective presentative) is an ongoing activity, a subpart of an event of *coming* counts as coming, and there is a natural finish to the activity, namely *arrival*. (Here we ignore uses of *ñów/come* in the perfect.) By contrast *reach* (or *jot*) does not denote an ongoing activity but rather it is understood to occur at a single moment, or, to put it differently, to be an instantaneous transition between states; i.e., the state of not having reached and the state of having reached (see Dowty 1979).

An example from the grounding experience is given below in 5a.

5) a. *Jim mungi-y* *ñ ó w*.
Jim 3:PRSNTTV-IMPF come
'Jim is coming.'

In the case of 5, the English translation is very close to the original -- the mover is moving towards the location of the speaker. When this way of construing the imperfective presentative is mapped onto temporal experience, we get the kind of construction we discussed extensively in Chapter 2 in which the mover's progressively getting closer to the location of the speech act maps onto a time's becoming more and more immanent. An example of this is given in 5b below in which the English translation is again very faithful to the original.

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5) b. *Tabaski mungi-y ñów.*
Tabaski 3:PRSNTTV-IMPF come
'Tabaski is coming.' (Tabaski is a major holiday.)
[Positive Black Soul]

Example 6a below employs the type of construction and metaphor seen in 5 in order to say that a day is coming without saying when it will arrive. This is possible because continued movement on a path towards a goal allows inferences about eventual arrival even in cases where no one knows when the mover will arrive.

6) a. *Bés angi-y ñów.*
day 3:PRSNTTV-IMPF come
'There's a day coming'; i.e., 'There will be a day.' (Said as a threat.)
[d K, Ba:98.]

Putting *jot* in the place of *ñów* in 6a produces a questionable sentence as in 6b. This is because *jot* does not have a use in which it denotes an ongoing process of change of the sort denoted by *ñów* in 5 above.

6) b. *?Bés angi-y jot.*
day 3:PRSNTTV-IMPF reach
Intended: There will be a day.
[d K, Ba:98.]

In addition to the use exemplified in 5 and 6a, it is a property of the imperfective presentative conjugation that it can be used to signify that an event is just about to happen (cf. Robert 1991). This is the only reading available for the imperfective presentative with *jot*. Such a reading is exemplified in 6c below.

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6) c. *Ba nga xamee né tàkkusaan*
when you know:ANT that late.afternoon.prayertime
angi-y jot, mu séen pënd ba.
PRSNTTV-IMPF reach 3.SUBJ discern dust the.DIST
"When you know that the late-afternoon prayertime was reaching, she spied the dust."
'When it was just about time for the late-afternoon prayer, she spied the dust.' [Kesteloot and Mbodj 1983:137]

To summarize, *ñów* can be used to construe the relationship between a future time and the present as an ongoing process in which a future time becomes more and more immanent. This is depicted metaphorically as translational motion. But when *jot* denotes a relationship between a future time and the present, the relationship is construed as a more or less abrupt change in which a future moment becomes a present moment. This is construed metaphorically as a moment making contact with the present. At the root of this contrast is the fact that *ñów* has a use in which it denotes ongoing translational motion whereas *jot* does not.

7.2.1.2. The tendency of jot *to occur with temporal cycles within the day.*

When speakers talk about the occurrence of a time of day, they usually use *jot*, for example as in 7 below.

7) *A^ dëes ëer jot na.*
EMPH two o'clock reach PERF.3
A! Two o'clock has reached.
'It's two o'clock.' (FS said this upon hearing the early afternoon call to prayer.) [att.] [s FS, Xi:76]

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By contrast, when the timeword[1] subject is a member of a cycle larger than the day, *ñów* tends to occur as in 8.

8) a. *Bu* *alxames* *ñówee* *mu* *xëye* *toolam....*
when Thursday come:ANT 3.SUBJ start.the.day:VAL fields:GEN
'When Thursday comes she goes to work in her fields.' (The subject of *ñów* is a day of the week.) [att.] [sXW, An:85-6]

b. *Léegi* *koor* *gi* *ñów.*
now Ramadaan the come
"Now Ramadaan comes."
'Ramadaan is coming right away.' (The subject of *ñów* is a month.)
[att.] [d K, Xi:59]

c. *Baadoolo* *yépp* *ñungee* *wax* *a^*
working.person all 3.PL:PRSNTTV.IMPF say EMPH
pare *leen* *nawet* *ñów* *na* *de^.*
get.ready 2.PL.IMPR rainy.season come PERF.3 EMPH
'The working people are all saying "Get ready, the rainy season has come."' (The subject of *ñów* is a season.)
[s C, An:157]

It is worth noting that tense systems are sometimes sensitive to the distinction *within the day vs. not within the day*. For example, some languages make a distinction between *same day* and other past tenses. (Cf. Comrie 1985, Fillmore 1997/1971, Hyman 1980, Schwenter 1994). Also, of course, languages apparently overwhelmingly tend to have lexicalized deictic day names corresponding to *yesterday, today, and tomorrow,* at least (cf. Fillmore 1997/1971, Tent 1998).

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Here are some of the details of the evidence for the correlation. During my fieldwork, I kept my ears out for tokens of temporal *jot* and *ñów*. It was clear that *jot* tends to occur with time-of-day subjects. I documented this tendency in my field notes, where I recorded most of the tokens of temporal *jot* and *ñów* that I heard. As an example, during the roughly one-month period from 26 October to 22 November 1997 in Saloum, I obtained the following data from spontaneous utterances in which *jot* or *ñów* occurred and its subject was a timeword: There were eight tokens of temporal *jot* and in all cases its subject denoted a time of day. The time-of-day words belong to the following types. The most commonly occurring type was prayer time.

Table 7.1: Types of time of day

TYPE	EXAMPLE
Prayer time	*tisbaar* 'the early-afternoon prayertime'
Clock time	*dëes ëer* 'two o'clock' (from French *deux heures*)
Sun time	*ngoon* 'evening'

There was one token of *ñów* that occurred with a timeword subject and that subject was *koor* 'Ramadan' (a month).[2]

The following data come from tape recorded interviews conducted with monolingual speakers of Wolof in Saloum. The data consists of all the tokens of Moving Time *ñów* or *jot* that occurred in selected portions of the interviews, except that tokens which were uttered in response to a question of mine that included the word *jot* or *ñów* were excluded from the count.

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For utterances in which the entity corresponding to the grammatical subject was a season or month, there were 3 tokens of *jot* and 10 tokens of *ñów*.[3]

For utterances in which the entity corresponding to the grammatical subject was a time of day, there were 14 tokens of *jot* and 5 tokens of *ñów*.

In cases involving days or non-timewords, the differences between *jot* and *ñów* were not great:

For utterances in which the entity corresponding to the grammatical subject was a day, there were five tokens of *jot* and three of *ñów*.

For utterances in which the grammatical subject was a not a timeword, there were three tokens of *jot* and five of *ñów*.

Next I present evidence from a published collection of transcribed orally performed folktales, myths, and legends (Kesteloot and Mbodj 1983) that supports the claimed correspondence.

In this text, I found 18 tokens of *jot*, 9 of which instantiated the Moving Time metaphor. There were 73 tokens of *ñów*, 5 of which instantiated the Moving Time metaphor.

Of the 9 tokens of Moving Time *jot*, 6 had a time of day subject and none had any other kind of timeword as a subject.

Of the 5 tokens of Moving Time *ñów*, 3 had the expression *at yi* 'the years' as subject, and none had any other kind of timeword as a subject.

The evidence from texts and spontaneous usage presented above is supported by native-speaker judgments. Native speakers judge *jot* to be more normal with time-of-day subjects and *ñów* to be more normal with positional terms that belong to periods of greater duration than the day. For example 9a was judged a more appropriate thing to say upon hearing a clock strike than 9b [s XW, Xi:117; s G, 19 nov].

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9) a. *Midi jot na.*
Noon reach PERF.3
"Noon has reached."
'It's noon.'

b. *Midi ñów na.*
Noon come PERF.3
'Noon has come.'

I gloss *Midi jot na* as 'It's noon' because the two expressions are stylistically as well as referentially equivalent. *Midi ñów na* and 'Noon has come' are equivalent in three ways: i) They are equivalent word for word. ii) They both instantiate the Moving Time metaphor in the same way. iii) They both treat the occurrence of noon as having been preceded by a period of expectation.

The statement just made reflects the intuitions of AK, who feels that *jot* encodes the instantaneous or punctual occurrence of a time and that *ñów* implies a period of expectation.

To summarize, the available data support the claim that, where timeword subjects are concerned, *jot* tends to occur with subjects that denote times of day, whereas *ñów* tends to occur with subjects whose denotations are defined in terms of durations greater than the day.

7.2.1.3. Jot *and non-timeword subjects.*

Up to this point we have been considering sentences in which the constituent in the role of grammatical subject is a timeword, e.g. *tàkkusaan* 'the late afternoon prayertime'. We found that in sentences with such subject constituents there are two clear contrasts between *jot* and *ñów* that are available to the intuitions of consultants, one having to do with the

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imperfective presentative construction and the other having to do with the relative punctuality associated with *jot*. Another kind of situation in which a clear difference between *jot* and *ñów* is available to introspection involves sentences in which the subject constituent is not an expression that conventionally denotes a point or period of time. An example is given in 10 below.

10) a. *Taw bi ñów na.*
rain the come PERF.3
'The rain has come.' (It is raining or just about to rain.)

b. *Tawjot na.*
rain reach PERF.3
'It's time for it to rain.' (There is not necessarily any sign of rain.)

In the case of *ñów* in 10a, an event is understood to have occurred — if not actual rain, then unmistakable signs of immanent rain. By contrast, in the case of *jot* in 10b what is understood to have occurred is a time. The meaning of *jot* in 10b has to do with a specialized understanding of temporal experience that goes beyond what is motivated by the mapping of *jot*'s physical semantics onto a temporal concept by the Moving Time metaphor. We will discuss this question more fully below (7.6.2).

7.3. Evidence that a space to time mapping is synchronically valid for *jot*.

Since I am claiming that temporal *jot* is not fully accounted for by Moving Time, it is important to be clear that there nonetheless *is* good reason to believe that a space to time mapping is involved in *jot*'s semantics. In this section I present some evidence that speakers do in fact understand temporal *jot* metaphorically. The first piece of evidence involves the observation that

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in Wolof the notion 'reach' (*jot*) is lexicalized separately from the notion 'reach for' which translates as *yóotu*. *Yóotu* is exemplified in 11a below.

11) a. *Yóotu naa ba sonn, jotuma ko.*
reach.for PERF.1 until be.tired reach:NEG:1 3.OBJ
"I reached for [it] until tired; I didn't reach it."
'I reached and reached for it but I couldn't reach it.'
[AK, Hai:132]

In certain physical contexts, *yóotu* means 'about to *jot*' (this is a typical kind of inference). In 11b we observe that *yóotu* can also be used figuratively to mean 'about to *jot*'.

11) b. *Timis angeey yóotu.*
dusk PRSNTTV:IMPF reach.for
"Dusk is reaching for." 'Dusk is approaching.'
'It's just about dusk.'
[s XB, 28decSpp]

Example 11b shows that at least some speakers sense a relationship between *jot* 'to occur (of a time)' and *jot* 'reach'. Furthermore the temporal meaning of *yóotu* in 11b is consistent inferentially with a conceptualization in which *jot* 'reach' means 'to occur (of a time)'. That is, if someone is reaching for (*yóotu*) something one can assume that she is probably about to reach (*jot*) it; i.e., make contact. This inference gives the correct result in the temporal scenario that *yóotu* means 'about to occur.'

In the next example the speaker generalizes over the temporal meanings of *ñów* and *jot*, characterizing them both as cases of arrival. This suggests a coherent mapping of concepts from a frame of translational motion onto corresponding temporal concepts (cf. Lakoff and Johnson 1980 on

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coherence). This in turn is consistent with the hypothesis that the temporal meaning of *jot* is structured by a Moving Time metaphor rather than being an idiosyncratic meaning associated with a single lexeme.

11) c. *Yooyu yépp nag ci lu agsi la.*
those all then LOCPREP REL arrive:VEN NONSUBJ.FOC.3
'Those are both cases of that which arrives.' (The speaker in this example is talking about the temporal meanings of *ñów* and *jot*.)
[s T, Xi:95]

7.4. The stative/nonstative distinction in Wolof verbs.

In order to fully benefit from the discussion of the range of uses of *jot* that is to be presented in the next section, we have to take a short look at the grammar of tense-aspect for Wolof verbs. Tense as such is not marked in Wolof, but the time of occurrence of an event or state relative to the speech act is inferred from the type of predicator in a sentence and the presence or absence of aspectual marking.[4] The predicator usually belongs to one of the two major classes of verb in Wolof: stative or non-stative (Diouf 1998, Diouf and Yaguello 1991, Robert 1991). The stative/nonstative distinction is important in this chapter because *jot* can belong to either class. Stative verbs denote states and have glosses like *be hot*, *be good*, or *have*. In the absence of contrary indications, the state denoted by a stative verb is interpreted as obtaining in the present, as in 12a-b.

12) a. *Dafa rafet.*
SFOC.3 be.beautiful
'It's beautiful.'

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b. *Rafet* *na.*
be.beautiful PERF.3
'It's beautiful.'

In the absence of contrary indications (e.g. imperfective marking), an event denoted by a nonstative verb is ordinarily interpreted as having happened in the past as in 12c-e.[5]

12) c. *Dafa* *daanu.*
SFOC.3 make.fall:MID
'It fell down.'

d. *Daanu* *na.*
make.fall:MID PERF.3
'It fell down.'

e. *Dama* *dem Mbuur.*
SFOC.1 go Mbuur
'I went to Mbuur.'

If a verb occurs with imperfective marking it is interpreted as happening in the nonpast as in 12f.

f. *Dama-y* *dem Mbuur.*
SFOC.1-IMPF go Mbuur
'I'm going to Mbuur.' (Right now; tomorrow; habitually.) 'I go to Mbuur.'
[Diouf 1998:22]

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7.5. Uses of *jot*

A look at the polysemy structure involved with physical uses of *jot* will show us that there are various ways that the semantics of *jot* are appropriate for talking about temporal experience. This and other factors suggest an analysis in which there are multiple motivations for the temporal semantics of *jot*. The following aspects of meaning are manifested in physical uses of *jot* and are relevant to the temporal use: contact, measurement, translational motion, (punctual) arrival, sequential encounters, and catching or catching up with (cf. Moore 1997b). These aspects of meaning are discussed in what follows.

i. 'Achievement of manual contact'.

The most basic sense of *jot* is one that involves stretching out the arm and hand, and perhaps the whole body, in order to make contact with something. What *jot* denotes in this use is very similar to what English *reach* denotes. I analyze this as the most basic use because it is the most richly perceived by the senses, and the entire scenario can be perceived more or less at one time.[6] Another reason I consider the 'contact' use basic is that this choice allows a description of the polysemy structure of *jot* in which all the uses are related to the basic use.

This basic use is exemplified in 13a below, which was uttered in the process of explaining the meaning of *jot*.

13) a. *Kaas bi jot nga ko léegi.*
glass the reach PERF.2 3.OBJ now
'You have gotten hold of the glass now.' (The addressee had just taken a tea glass from a tray.) [s T]

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Although 13a was uttered spontaneously, it does not represent an ordinary usage because in the situation in which it was uttered there was no issue of whether access was possible. In Wolof as in English, successful acts of reaching, when they occur, are usually called something else, like 'taking' or 'touching'. The example in 13b below is more ordinary.

13) b. *Jotuma ko.*
reach:NEG:1 3.OBJ
'I can't reach it.'
[att.] [s PT]

13c is similar to 13b except that (c) is affirmative.

c. *Jot naa téere bi ci kaw armoor bi.*
reach PERF.1 book the LOCPREP top cabinet the
'I can reach the book on top of the cabinet.' [AK, Moore 1997b]

The sentence in 13d below talks about order of access.

d. *Bësal butoŋ bi ngay jëkk a jot!*
press:IMPR button the 2.SUBJ:IMPF be.first MBA reach
'Presse le premier bouton!'
"Press the button that you reach first."
'Press the first button.'
[Fal, Santos, and Doneux 1990 under *bës*]

What is important in 13d is which button will be accessible to physical contact first in the imagined scenario. The order that the buttons are in is framed in terms of the order in which they are assumed to be encountered by

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the addressee. There is a fixed order of successive encounters. This semantic component of making contact with an item in a sequence is important to the temporal meaning of *jot*.

The next use to be exemplified involves translational motion, which is of course essential if *jot* is to be analyzed as instantiating the Moving Time metaphor.

ii. 'Getting to a goal'

The 'getting to a goal' use, as in example 14a below, retains the *making contact* aspect of the 'manual contact' use. In the example, getting to a desired location is talked about with *jot*.

14) a. *Dama bëgg a jot bant bale.*
SFOC.1 want MBA reach post that
'I want to get to that post right there.' [d K]

Example 14b below is essentially the same as 13d above, except that in 14b translational motion is involved.

b. *Bitig bi ngay njëkk a jot....*
store REL 2.SUBJ:IMPF be.first MBA reach
"the first store that you reach..."
'the first store that you come to...'
(Said by way of giving directions.)
[att.] [Xi:51]

Example 14b thus combines the crucial qualities of translational motion and sequential access, associating *jot* with a plausible experiential grounding for the Ego-centered Moving Time metaphor.

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Linguistic motivation

We do not, however, have an account of experiential grounding for Moving Time *jot* that is as clear cut as the account we have for *ñów* 'come'. What makes the case of *ñów* (and *come*) clear cut is that the Moving Time *constructions* themselves are *grounded* in a sense similar to that of C. Johnson 1998, 1999b.[7] Although I did not mention the term, the phenomena involved in *constructional grounding* were discussed in section 2.2, where the discussion was framed in terms of metonymy. What makes Moving Time *ñów* constructions grounded is that they are minimally distinct from Source-Domain constructions, as we see in 15a-b, and there are examples that refer to elements of both the grounding experience and the Target-Domain scenario, as in 15c-d. I.e., there is a combined simultaneous interpretation, or what C. Johnson (1999b:17) calls *interpretational overlap*. Thus, the use of the Source construction motivates the use of the Target construction.

15) a. *Jim mungi* *ñów*.
Jim 3:PRSNTTV come
'Jim is coming.'

b. *Tabaski mungi* *ñów*.
Tabaski 3:PRSNTTV come
'Tabaski is coming.' (Tabaski is a major holiday.)

c. *Taw baangi* *ñów*.
rain the:PRSNTTV come
'The rain is coming.' 'It's going to rain.' (Interpretational overlap would occur in a situation in which a visible weather front was approaching as the interlocutors were expecting the future occurrence of rain.) [AK, 091999]

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15) d. *Nawet baangi ñów ....*
rainy.season the:PRSNTTV come ....
'The rainy season is coming ....'
[AK, 091999]

e. *Noor ñów na léegi.*
dry-season come PERF.3 now
"The dry season has come now."
'The dry season is here.'
[att.] [s R, Lu:144]

Constructional grounding is important because it constitutes evidence of what the experiential grounding of a metaphor is. Crucially, also, constructional grounding answers the question of why a particular lexeme should have a particular extended use (C. Johnson 1999b).

While not all of the major metaphorical temporal constructions we have seen in this dissertation are constructionally grounded, there is a clear sense in which the conceptual metaphor involved in each is *linguistically motivated*. That is, for all these metaphorical temporal constructions there are minimally distinct Source-Domain constructions. Compare, for example, 16 below.

16) a. *Binta/midi fekk na bool ba*
Binta/noon become.co-located.with PERF.3 bowl the.DIST
ca waañ wa.
LOCPREP.DIST kitchen the.DIST
"Binta/noon 'found' the bowl in the kitchen."
Physical version: 'Binta 'found' the bowl in the kitchen.'
Temporal version: 'The bowl was in the kitchen at noon.'

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Here is why the 'getting to a goal' use of *jot* does not provide linguistic motivation for the 'occurrence of a time' use: While *Jot na* 'It has reached' is used to say that it is now a certain time, *jot* is not used in a parallel fashion to say that something or someone has now reached a certain physical point. It can be argued that this does not constitute a lack of the Source-Domain concept corresponding to the temporal meaning of *jot*. This is because the physical scenario in question *is* coded with *jot* in 'getting to a goal' uses.

The problem is only that 'getting to a goal' uses of *jot* seem to always occur embedded in subordinate clauses or noun phrases rather than in finite contexts. Consider the example repeated in 16b below (cf. also example 14b above).

16) b. *Boo demee ba jot Puut ....*
when.you go:ANT to.the.point.of reach Puut
"When you have gone to the point of reaching Puut ...." "When you go and reach Puut...."
'When you reach Puut....' (=2c above. *Puut* is a town.)
[AK]

Examples such as 16b show that Wolof speakers use the word *jot* to denote a state of affairs in which an entity arrives at a location. Thus there is evidence that *jot* expressions do in fact instantiate the Moving Time metaphor. What is lacking is the speech-act force of commenting on something that has just happened in the "here and now." Thus physical motion/location uses of *jot* are not fully analogous to temporal uses. This contrasts with the other cases we have seen in this dissertation, in which there *are* physical motion/location uses that are fully analogous to the temporal uses. This analogy, which is a matter of linguistic practice, is what I call *linguistic motivation*. Although I do not have a fully worked out theory of linguistic motivation at this point, I believe the idea is intuitively clear.

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The lack of strong linguistic motivation for temporal uses of *jot* means we cannot pinpoint a specific experiential grounding scenario for *jot* like we can for other predicators such as *ñów* 'come', *agsi* 'arrive', and *fekk* 'become co-located with'. Although the physical semantics of *jot* are compatible with the Moving Time metaphor, we do not have an answer to the question of why the lexeme *jot* — rather than *agsi* 'arrive', for example — should be a high-frequency temporal term in Wolof. For this reason we will examine several physical uses of *jot* that are potentially relevant to the temporal use.

iii. 'Measurement reach'

What the 'measurement reach' uses retain from the basic ('manual contact') use is the notion of something extending through space to the point of touching a goal object. The notion of *measurement* has relevance to temporal experience in that one of the main things people do in temporal uses of *jot* is establish the value of a moment on a temporal scale, as in for example *Midi jot na* 'It's noon', which establishes the value of the present moment as *noon*. (The importance of *measurement* in the temporal semantics of *jot* was emphasized to me by Ibrahima Bâ, i.p.c).

In example 17a below, *jot* is used to say that a rope spans a contextually understood distance; for example it reaches the water in the bottom of a well. This differs from the 'manual contact' use essentially in that the reacher is inanimate and its length is one of its most salient characteristics. Note that in the 'measurement' use *jot* refers to a *state* that obtains at the time of the speech act. The grammatical object of *jot* is optionally omitted; thus the 'measurement' use of *jot* instantiates the same syntactic pattern as the 'occurrence of a time' use: [(NP +) V + Inflection]; i.e., "(X) *jot na*".

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17) a. *Buum gi jot na.*
rope the reach PERF.3
'The rope reaches.'
[Moore 1997b]

In 17b below, *jot* means 'fit' in the sense of a piece of clothing fitting a person. More precisely, if a piece of clothing is said to *jot*, that means it is big enough, and this implies that it is also not too big. If it were too big however, one would *not* say that it does not *jot*.

17) b. *Ndax tubéy ji jot na?*
Q pants the reach PERF.3
'Do the pants fit?'
[AK, 52399]

The use in 17b is very similar to the use in 17a, except that in 17b, more dimensions are involved. In 17a the length of the rope is evaluated from a starting point and a judgment is made concerning whether the rope spans the entire distance from the starting point to the endpoint. In the case of the clothing the same sort of judgment is made, but this time the judgment involves determining whether the desired endpoint is reached in three dimensions corresponding to the contour of the part of the body the clothing is supposed to fit.[8] What is relevant about this for present purposes is that it highlights the notion of a target being in alignment with a standard. If a piece of clothing fits, the clothing and the body correspond to each other precisely – – they are in a sense the same size. When a time occurs, that time and the present moment are in an analogous state of correspondence, but rather than being the same size, they are the same time.

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In spite of the fact that the 'measurement reach' use instantiates the same syntactic configuration as the 'occurrence of a time' use, it is unlikely that the former motivates the latter linguistically. This is because when people use *jot* as in *Midi jot na* 'It's noon' to note the time of day, they are remarking on a change, and there is no analogous way in which a 'measurement' use like *Buum gi jot na* 'The rope reaches' (as in 17a above) would be used to comment on an event.

However, the stative use is highly relevant to the question of why *jot* is appropriate for talking about temporal experience.[9] This is because the present moment can be construed as a state. Note that English speakers refer to the present moment as a state when they say *It's noon*. Cf. Croft 1998:70 for the idea that a time of day like *noon* is a punctual state.[10] The linguistic form *jot na* 'reach PERFECT.3' is ambiguous between a stative and a nonstative reading. *Jot*'s capability of coding both a punctual and a stative meaning is appropriate to the encoding of times of day, if times of day like noon are analyzed as punctual states. Recall from section 7.4 that the Wolof perfect can encode present states not necessarily having to do with completed events. (See Anderson 1982 for a crosslinguistic characterization of the perfect.)

Stative/nonstative ambiguities or alternations are not uncommon in Wolof verbs. More specifically the alternation is stative/inchoative (cf. Jackendoff 1990, Talmy 1985:88-9). Examples that we saw in section 6.3.1 include *sore* 'get/be far' and *jege* 'get/be near. The alternation is further exemplified below. The examples are given in the perfect conjugation, which combines felicitously with both the past-inchoative and present-stative interpretations. It is a characteristic of perfects, generally, that they can code a past event and/or the present state that results from the event (Fleischman 1983, 1990 and references therein, etc).

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18) a. *Dee na ca ja ba.*
die PERF.3 LOCPREP marketplace the
'She died in the marketplace.'

b. *Dee na.*
die PERF.3
'She's dead.'
[Moore 1997b]

Suggestive evidence that speakers of Wolof in rural Saloum may think of times of day as punctual comes from utterances of sentences like example 1, *Tisibaar jot na* "The early afternoon prayertime has reached," 'It's the early afternoon prayertime.' I heard such utterances fairly frequently in Saloum in which the speaker commented on the time of day in response to either the call to prayer or the chiming of a clock.[11] Such comments in response to stimulus suggest that the speakers felt that the time in question occurred at the very moment of the stimulus. Also, AK feels that *jot* expresses the precise occurrence of a time. He translates *Midi jot na* as 'Noon has struck.'

Given that the lexeme *jot* is ambiguous between a stative and nonstative interpretation, it could be that the stative meaning of *jot* is part of what (unconsciously) motivates speakers to use *jot* to talk about the occurrence of times.

The performative utterances cited below constitute a case in which the Wolof perfect is simultaneously compatible with a past and present reading. This is not a contradiction because tense is not marked in these utterances. The utterances below may be interpreted as referring simultaneously to the event of uttering the performative and the state that obtains as a result. The verbs in the examples below, *mey* 'give' and *ñaan* 'request', ordinarily have nonstative interpretations only. Recall that nonstative verbs as a rule in Wolof are interpreted as referring to past events, absent contrary indications.

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19) a. *Mey naa la.*
give PERF.1 2.OBJ
"I have given [it] to you"; 'I give [it] to you' [It's yours]. (Used performatively to accomplish an act of giving.) [att.] [Kaolack, Xi: 141]

b. *Ñaan naa mbuum mi.*
request PERF.1 tea.leaves the
"I have requested the tea leaves"; 'I request the tea leaves.' (Used performatively in order to request tea leaves.)
[att.] [s, Xi: 141]

Next we see that a single verb in a single utterance can be interpreted both inchoatively and statively in the perfect conjugation, as in the next example which was said to me by a taxi driver in Dakar. He was assuring me that there was a meter and it was running. *Gis* 'see' (unlike *mey* 'give' and *ñaan* 'request') has both stative and nonstative readings.

20) a. *Gis nga ko?*
see PERF.2 3.OBJ
'Have you seen it?/Do you see it?' [the meter].
[att.]

The following elicited judgment makes the same point (cf. Vendler 1967:97-121).

b. *Gis naa ko.*
see PERF.1 3.OBJ
"I spotted it and I see it." 'I have caught sight of it now.'
'I saw it.' 'I have seen it.' 'I see it.' [AK, Moore 1997b]

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In 20b above, the speaker simultaneously reports having caught sight of something and continuing to see it. Comrie 1976:57, citing Welmers (1973:347-8) notes a similar phenomena in Kpelle, where "... even 'see' is expressed as a Perfect, i.e. *aâ `káa* can correspond to either 'he sees it' or 'he has caught sight of it.'" Thus it is plausible that *Jot na* said of a time encodes a notion paraphrasable as "has struck and is." E.g., *Midi jot na* is translatable as "Noon has struck and it's noon," where *jot* refers to the punctual occurrence and the resulting state.

iv. 'Catch'

In the final physical use to be discussed here, *jot* means 'catch' or 'catch up with'. The 'catch' use is related to the 'getting to a goal' use with the minimal difference that in the 'catch' use the goal is moving. This seems to be the only physical use of *jot* that occurs nonstatively in main clauses and that is semantically relevant to the 'occurrence of a time' use. Thus 21 below could be used to report that a lion has just caught someone, and this is parallel to how one can announce that noon has just struck by saying *Midi jot na* "Noon has reached." However, there is a syntactic difference between the 'catch' use and the 'occurrence of a time' use that would prevent the former from linguistically motivating the latter: The grammatical object of *jot* is obligatorily expressed in the 'catch' use but obligatorily not expressed in the 'occurrence of a time' use. Moreover, there is no obvious pervasive correlation in experience between being caught and the occurrence of a time.

21) *Gaynde gi jot na ko.*
lion the reach PERF.3 3.OBJ
'The lion (has) caught her.'
[AK, Moore 1997b]

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However, there is a way that the 'catch' use of *jot* could indirectly motivate the instantiation of Ego-centered Moving Time in *jot* expressions. This would involve an Event Structure metaphor whereby Ego is moving along on an activity path and events catch up with her. Lakoff and Turner (1989:34ff) discuss several metaphorical construals that involve such an idea. Compare for example TIME IS A PURSUER (p. 34), and TIME IS A CHANGER.

Ego is often construed as metaphorically moving along an activity path. In 22 Ego is construed as moving via the Goal Oriented Activity metaphor (cf. section 6.3.3.2) through a tea-making process that involves making two rounds of cups of tea from the same leaves.

22) A: *Foo* *tollu* *nii?*
where.you be.equivalent like.this
"What point are you equivalent to like this?"
'What stage [of the tea-making process] are you at right now?'
B: *Dëesyem.*
Second
'I'm brewing the second round.'
[att.] [An:64]

The idea of an event or state metaphorically catching up with someone is found in English expressions like *His drinking finally caught up with him. These doctor bills caught me at a bad time. I hope the flu doesn't catch up with me this season.*

In Wolof, *jot* can be used to say that an event or state has 'caught' a person. The ordinary way to ask what has happened when there is something wrong with a person is to ask what has 'caught' her, using *jot* as in 23a below.

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23) a. *Lu la jot?*
what 2.OBJ reach
"What has caught (up with) you?"/"What has reached you?"
'What's wrong with you?'

If what is wrong with a person is a disease, the disease can be said to have caught the person:

b. *Feebar bu bon moo ko jot.*
illness REL bad 3.SUBJ.FOC 3.OBJ reach
"A bad illness (has) caught/reached him."
'A bad illness afflicted him.' 'He has been striken by a bad illness' [AK].
[Munro and Gaye 1997 under *jot*. The first translation in single quotes is from the original.]

The examples in 23 above are evidence for a mapping of agents onto causes, and the physical effects produced by agents onto effects more generally.[12] Cf. Lakoff and Johnson 1999, CAUSES ARE FORCES (p. 179); the Nature as Human Agent metaphor (p. 212). See also Lakoff and Turner 1989 on EVENTS ARE ACTIONS.

Next is an Event Structure example in which a time is defined in terms of sleepiness 'catching up' with someone. (In this example, unlike the previous ones, the metaphorical agent is not considered to be bad.)

24) a. *Waxtu nelaw mooy fu ma gëmméentu jot-e.*
hour sleep 3.SUBJ.FOC:IMPF where 1.OBJ drowsiness reach-VAL
"Time to sleep is wherever drowsiness catches up with me"
'Time to go to sleep is whenever drowsiness catches up with me.'
[AK, 52099]

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Example 24b below paraphrases 24a above — with the same metaphorical construal, but with syntax that is appropriate to the 'occurrence of a time' use of *jot* in that the grammatical object is not realized overtly. The valence-altering suffix (VAL) on *jot* in both examples indexes the locations coded by *fu* 'where'. These locations map onto times when hypothetical instances of sleepiness are said to occur, at which Ego is metaphorically located. The grammatical object of *jot* is presumably Ego in (b) as it is in (a).

24) b. *Waxtu nelaw mooy fu gëmméentu jot-e.*
hour sleep 3.SUBJ.FOC:IMPF where drowsiness reach-VAL
"Time to sleep is wherever drowsiness reaches."
'When drowsiness strikes, that's when it's time to go to bed (for me).'
[AK, 52099]

The examples cited below are specifically temporal — i.e., the subject of *jot* is a metaphorically moving time — but retain the characteristic of the Event Structure examples that the metaphorical mover has an effect on the person or people who are 'reached'. In contrast to the event cases, however, in the temporal cases there is no tendency for the agent/mover to be construed as bad.

25) a. *Wax jot na.*
talk reach PERF.3
"Talk has reached."
'The time has come to say something.' (I.e., as a result of what has happened up to a certain point in the narrative, the people in question have to speak out.)
[Jeŋ 1992]

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25) b. *Tereet* *jot* *na* *ci* *yow*.
trading.season reach PERF.3 LOCPREP you
"The trading season has reached at you."
'It's the trading season for you.' (I.e., You're ready to start selling your crops.)
[s G, 19 Nov Tape.]

The fact that *jot* predications sometimes treat occurrences of times as events that have effects on people is support for the hypothesis that the 'occurrence of a time' use of *jot* is partially motivated by an Event Structure metaphor in which agents map onto causes.

Finally, the Moving Time use of *jot* is listed as a separate entry for the sake of completeness.

v. 'Occurrence of a time'

26) *Waxtu bi* *jot* *na.*
time the reach PERF.3
"The hour has reached."
'It's time.' (I.e., a contextually identified time has occurred.)

Summary.

We have seen a collection of meanings/uses of *jot* that are relevant to the 'occurrence of a time' use in various ways: Translational motion, arrival, contact, sequence, catching up with, and measurement. There are clearly experiential correlations between the translational motion concept of 'reaching' or 'catching' encoded by *jot* and the concept of the 'occurrence of a time' also encoded by *jot*. The case of *jot*, however, stands apart from the

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other cases of temporal metaphor we have seen in that temporal uses of *jot* are not linguistically motivated — there are no motion/location uses of *jot* that are fully analogous to temporal uses. Since the 'occurrence of a time' use of *jot* is not linguistically motivated, we are left with the question of why *jot* rather than some other lexeme should appear in the kinds of temporal expressions it does and with such high frequency. The case of *jot* thus requires an account in which there are factors in addition to direct experiential correlation that motivate its temporal uses.

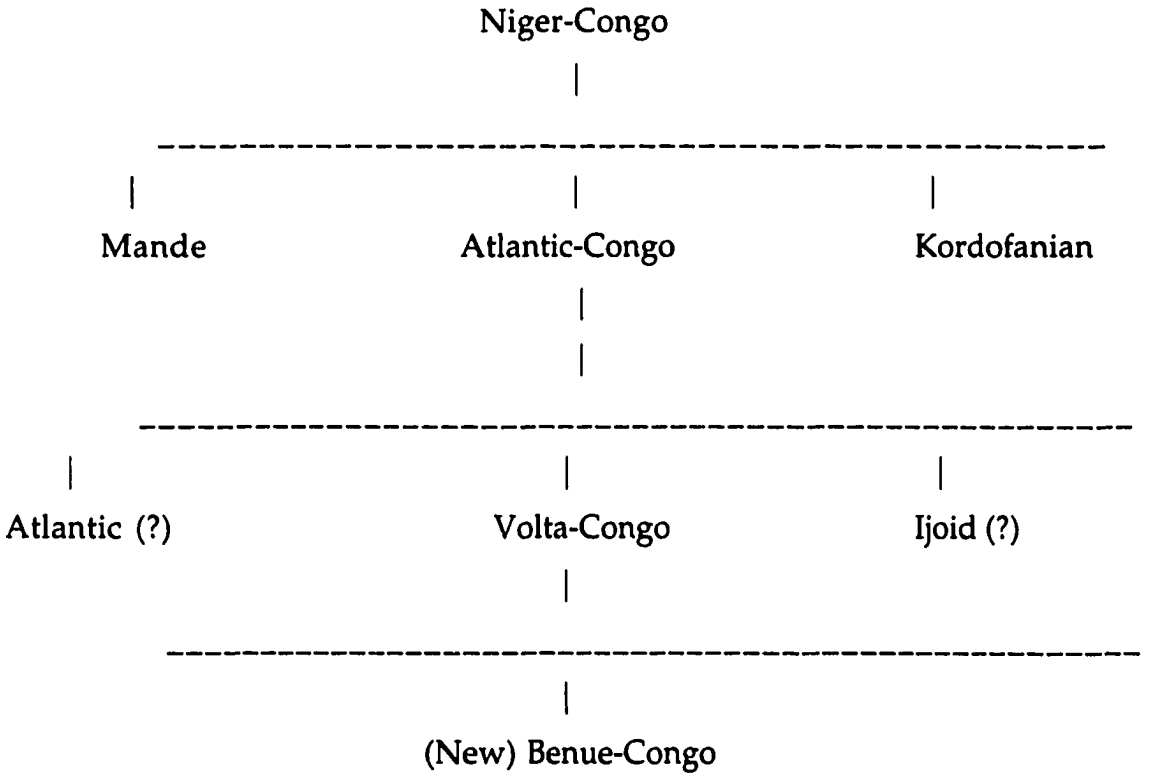
7.5.1. A crosslinguistically shared polysemy structure.

My claims about the relevance of the various physical uses of *jot* to the temporal use presuppose that the uses of *jot* we surveyed, including the temporal use, are related to each other conceptually and not just an accidental collection of word-meanings. In addition to the fact that the different uses of *jot* are describable — as we saw above — in a way that shows their relatedness, there is evidence from areal semantics that the different uses of *jot* are semantically related to each other.

There is a word in (Gambian) Mandinka that has almost the same collection of uses as *jot* has in Wolof, including the temporal use. Mandinka and Wolof are not closely related (Bendor-Samuel 1989; see the diagram below). They are also typologically distinct; for example Wolof has noun classes but Mandinka does not, Mandinka has an alienable/inalienable distinction in possession but Wolof does not, and Mandinka has verbal morphology that is sensitive to transitivity but Wolof does not. However, Wolof and Mandinka are in close contact in Senegal and The Gambia. This contact would explain why they have a similar lexical category. Some such explanation is appropriate because not all Niger-Congo languages have a

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lexical category like *jot*. For example Chichewa, a Bantu language spoken in Malawi, does not (Sam Mchombo, i.p.c. 1998). I do not have any data on what other languages do or do not have such a category. To give an idea of how Wolof, Mandinka, and the Bantu languages are related to each other, the diagram below summarizes the relevant data from Bendor-Samuel[13] (1989:21, Figure 1.4). Mandinka is a Mande language, Wolof is an Atlantic language, and the Bantu languages belong to (New) Benue-Congo. (The question mark after *Atlantic* means that the status of the family is not firmly established.)



The lexeme in question in Mandinka is *síi* and is exemplified below. The similar polysemy patterns of *jot* and *síi* are evidence that the various uses of *jot* are meaningfully related to each other, since we would not expect such a category to arise accidentally in two languages, or be borrowed if it were not semantically coherent. This supports the idea that the physical uses of *jot* that we discussed have something to do with the temporal use.

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The polysemy of Mandinka síi *'reach'.*[14]

i. 'Achievement of manual contact.'

27) *m man sii siboo la*
1 NEG reach palm.rafter LA
'I can't reach the rafter.'

ii. 'Getting to a goal'

Consultants did not accept a Mandinka translation with *síi* of a Wolof example like *bitig bi ngay njëkk a jot* 'the first store that you reach'. One Mandinka consultant did say that such a sentence sounded like something a grandmother would say. This suggests the possibility that such a use may have been current in Mandinka in the past.

Rowlands 1959 provides the following example. This exemplifies a very good experiential grounding for a temporal expression. In this example, however, the Wolof translation would be with *àgg* 'arrive' or *tollu* 'be equivalent' rather than *jot*.

28) *ní tìloo síi-ta kùnto, í ye ´n fíriŋ jùloo la*
when sun:ART reach-PRFCTVE overhead
'When the sun reaches overhead, you are to free me from the rope.'
[Rowlands 1959:77]

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iii. 'Measurement reach'

29) a. *juloo a-maŋ jiyo sii koloŋo kono*
rope:ART 3-NEG water:ART reach well:ART inside
'The rope doesn't reach the water in the well.'

b. *nna dondikoo sii-ta*
my clothing:ART reach-PRFCTVE
'My clothing fits.'

iv. 'Catch'

30) *a bori-ta bari jatoo a sii-ta la*
3 run-PRFCTVE but lion:ART 3 reach-PRFCTVE LA
'He ran but the lion got him.'

v. 'Occurrence of a time'

31) *waatoo sii-ta*
time:ART reach-PERFECTIVE
"The time has reached."
'It's time.' [Cf. Gamble 1987:129]

As evidence of the relevance of Mandinka *síi* to Wolof *jot*, let us look at another pair of motion verbs that undergo a parallel semantic extension in Wolof and Mandinka. Both languages have a verb that means 'become co-located with' in physical uses and is extended in a phrase that means something like 'if it happened that'. This is evidence that Wolof and Mandinka speakers share conceptual strategies for using verbs of motion in extended senses.

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In example 32a below the Mandinka word *tára* 'become co-located with' is extended in much the same way as its Wolof translation equivalent *fekk* in 32b.

32) a. Mandinka

n'íí y'aa tára íte le-mu
if.you PRFCTVE.3 become.co-located.with 2.EMPH FOC
ñìŋ kíitio tèebaa ti, i be sàa díi la jùmaa le la?
this trial [judge FOC]...
"If you found it you are the judge of this case ..."
'If you happened to be the judge of this case, to whom would you give the sheep?'
[Rowlands 1959:78]

b. Wolof

Bu fekkoon ne yaay àtte
if/when become.co-located:PAST COMP 2.SUBJ.FOC:IMPF judge
mbir mi kan ngay jox xar mi?
situation the who NONSUBJ.FOC.2:IMPF give sheep the
"If it found that you are judging the case who do you give the sheep to?"
'If it happened that you were the judge of the case, to whom would you give the sheep?'
[AK, 080899]

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7.6. *Jot* denotes a specifically temporal concept.

7.6.1. The contrast between jot *and* agsi *'arrive at the location of the speech act'.*

I have claimed that *jot* has a specialized temporal meaning that is not fully accounted for by its physical semantics plus the Moving Time metaphor. One kind of evidence for this comes from comparing *jot* with *agsi* 'arrive at the location of the speech act'.

Agsi, as we saw in section 6.3.3.4, is formed from the lexeme *àgg* 'arrive' plus the ventive suffix *-si* which indicates that the referent of the subject of the verb comes to the location of the speech act to do whatever the verb denotes. Moving Time uses of *agsi* are experientially grounded and linguistically motivated in the same kind of scenario that grounds Moving Time uses of *ñów* 'come'. Thus, arrival at Ego's location maps onto the occurrence of a time (cf. Chapter 2). The semantic relatedness of *agsi* and *ñów* is shown in 33 below for physical uses and 34 for Moving Time uses.

33) a. *Sa xarit agsi na.*
your friend arrive:VEN PERF.3
"Your friend has arrived." 'Your friend is here.'

b. *Sa xarit ñów na.*
your friend come PERF.3
"Your friend has come." 'Your friend is here.'

Example 34 is part of an explanation of the conditions under which it would be appropriate to utter *Nawet ñów na.* (Moving Time *agsi* was fully exemplified in section 6.3.3.4.)

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34) ...Nawet ñów na, ... *fekk* *booba*
rainy.season come PERF.3 ... become.co-located.with at.that.time
moom, *agsi* *na* *be* *pare.*
3.EMPH arrive:VEN PERF.3 to.the.point.of be.ready
"'*The rainy season has come*' ... finds at that time, it has already arrived." (The speaker was saying that in any situation in which it is appropriate to say "The rainy season has come," it will be the case that the rainy season has already arrived.)
[s G, Ba:29]

It is interesting to compare *jot* with *agsi* because the two verbs have the same aspectual character in that they both denote instantaneous events of change of location (technically, they code a change of state; see Dowty 1979). In light of its strong experiential and linguistic motivation, *agsi* might seem to be more appropriate as a temporal term than *jot*. But *agsi* is not a high-frequency temporal term like *jot* is. So there is something more than compatibility with Moving Time that makes *jot* appropriate as a temporal term.

A semantic contrast between *jot* and *agsi* (= *àgg* 'arrive' plus *-si*) is revealed by how *jot* behaves with the ventive suffix *-si*. The meaning of Moving Time *agsi* is fully characterized by the spatial meanings of *àgg* and *-si* plus the Moving Time metaphor, in which the goal of motion coded by *-si* in the grounding experience maps onto "now" in the Target Domain (Chapter 2). Schematically, *agsi* (with *-si*) and *jot* (without *-si*) both map an event of arrival at the location of the speech act onto the occurrence of a time. Thus, we would expect *-si* to have a different function in *agsi* vs. *jotsi*. And in fact the meaning is different: Whereas *agsi* means to metaphorically "*àgg*" at "now", *jotsi*[15] means to metaphorically "almost *jot*" (at "now").

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35) a. *Timis jot-si na.*
dusk reach-VEN PERF.3
'It's just about dusk.'

b. *Koor ag-si na.*
Ramadan arrive-VEN PERF.3
'Ramadan has arrived.' 'It's Ramadan.'

In the case of *jotsi* as in 35a, *-si* does not have its ordinary spatial semantics which are then mapped by the Moving Time metaphor as is the case with *agsi* in 35b. Rather, what is involved is an extended use of *-si* that often appears with stative verbs as in 35c below.

35) c. *Maangi maggat-si.*
1:PRSNTTV be.old-VEN
"I'm coming to be old." "I'm just about old."
'I'm getting to be old.'

In this extended use of *-si*, a stative verb, e.g., *maggat* 'be old' as in 35c, is construed as denoting an ongoing event, 'getting old', which has as its resultant state 'being old' (cf. Chang, Gildea, and Narayanan 1998; Langacker 1987). Example 35c says that the subject of the sentence is almost at the resultant state in the ongoing event denoted by the derived verb *maggatsi* 'be getting old' — the subject is metaphorically 'coming' to the resultant state, which is construed as a location (cf. Emanatian 1992).

The most likely construal of *jot* in 35a is stative. This is because a nonstative construal of *jot na* '*jot* PERFECT' would entail that the event (i.e., the occurrence of a time) be completed, and it would be odd for such an event to then receive an alternate construal as being about to occur. Thus in 35a, the

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most probable analysis is that *-si* is suffixed to the verb of the stative clause *Timis jot na* 'It's dusk' which is as a consequence construed as an ongoing event 'It's getting to be dusk', and this event is construed as almost complete. Thus, whereas in 35b *-si* has its locative Source-Domain semantics, in 35a *-si* appears in a special aspectual use.[16]

To summarize, the case of *agsi* involves the translational motion uses of *-si* and *àgg* which combine regularly and are mapped metaphorically onto the occurrence of a time. In the case of *jotsi*, what is involved is a special extended use of *-si* that modifies the aspectual profile of an event or state. The suffix *-si* thus modifies the motion semantics of *àgg* but not of *jot*. What *-si* modifies in the case of *jot* is a particular aspectual construal of an occurrence of a time of day. Thus *-si* is modifying a temporal rather than a physical characteristic of *jot*'s meaning. This suggests that *jot* codes a specifically temporal notion rather that one that is fully structured by a motion event.

7.6.2. Jot and the concept of event-moment pairing.

Further support for the claim that *jot* is specialized for talking about temporal experience comes from expressions in which the subject of *jot* is an expression that denotes an event. This was discussed briefly in section 7.2.1.3. in connection with the example repeated below.

36) a. *Taw bi ñów na.*
rain the come PERF.3
'The rain has come.' (It is raining or just about to rain.)

b. *Taw jot na.*
rain reach PERF.3
'It's time for it to rain.' (There is not necessarily any sign of rain.)

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The construal involved in these cases assumes the Ego-centered Moving Time metaphor along with the additional concept characterized below.

The concept of event-moment pairing

a) Every event has a time at which it happens or is supposed to happen;

b) In cases where the event in question is an action, the occurrence of the time entails that someone has an opportunity or obligation to do the action.

The fact that *jot*'s meaning makes reference to the concept of event-moment pairing is not predictable from *jot*'s physical semantics. *Jot*'s conventional association with the event-moment pairing is an important way in which *jot* is specialized for temporal reference.

Evidence for the idea in Wolof culture that every event has a time at which it happens can be found in the Fal, Santos, and Doneux (1990) dictionary, where the following is given as an example sentence for *waxtu* 'hour, appointed time'.[17]

37) *Lu nekk am na waxtu.*
REL exist have PERF.3 hour
'Chaque chose vient en son temps.'
'Everything has its time.'
[Fal, Santos, and Doneux 1990 under *waxtu (w)*]

The conventional association of the concept of event-moment pairing with the lexeme *jot* has the following consequence: For any kind of action or

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event X that can be the subject of *jot*, if X is the subject of *jot* in a sentence, the sentence means something like "it's time to X." This is a metonymic association between an event and the time at which it is supposed to occur. A related metonymy was mentioned in Chapter 3 in the context of the FRONT/BACK Moving Time metaphor. What is involved with *jot* is different from the sort of case discussed in Chapter 3, however. One difference is that in Chapter 3 we were concerned with a correlation between events and the times at which they are assumed to happen whereas with *jot* the correlation is between events and the times at which they are *supposed* to happen. Another difference is that in the case of *jot*, there is a conventional metonymy associated with the lexeme *jot*. This metonymy specifically invokes the concept of event-moment pairing. Following is another example of event-moment pairing.

38) *Bala ngaa xam lu taat di jariñ,*
before 2.SUBJ:PRTCLE know what butt AUX benefit
na toog jot.
HORT sit reach
"Before you know what (your) butt is good for let it be time to sit." This is a proverb meaning 'Before you know how useful something is, let it be time to use it.' For example, you find out what a candle is good for when the electricity goes out, especially if you don't have one. (Cf. *You don't miss the water till the well runs dry.*)
[52099] [cf. Cissé, Guèye, and Touré 1982]

In principle any noun or clause X could be the subject of *jot* and the resulting phrase would be interpreted as 'time to X'. Even *saalit* 'to lose it' -- which consultants have not accepted in collocation with *jot* — has a context where it occurs with *jot* and means 'time to lose it'. Here is a quote from the novel *Aawo Bi*.

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39)

A: *Ey Mbeen, bul saalit.*
hey Mbeen, NEG.IMPR lose.it
'Come on, Mbeen. Don't lose it.'

B: *Saalit daa jot di ....*
lose.it SFOC.3:? reach EMPH
"Losing it has reached..."
'It's high time to lose it ... '
[Jeŋ 1992:61; 8.22.99]

The examples in 40 below show a contrast involving *jot* vs. *ñów* and *agsi*. In this case, in order to talk about a time 'coming' or 'arriving' with *ñów* or *agsi*, a word like *waxtu* that specifically denotes a point or period of time is needed. By contrast, if the verb *jot* is used, no noun like *waxtu* is needed.

40) a. *Waxtu gas teen agsi/ñów na.*
hour dig well arrive/come PERF.3
'The time to dig a well has arrived/come.'
[AK, Q:18]

b. *Gas teen jot na.*
dig well reach PERF.3
"Digging a well has reached."
'It's time to dig a well.'

I have characterized a difference between *jot* and *ñów* such that whereas a speaker uses *jot* to say that something is supposed to happen at a certain time, *ñów* is used to say that something is present in the situation of

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the speech act. This characterization also holds in contexts in which the physical presence of an entity is not what is in question. Such a context is exemplified in 41 below.

41) a. *Wax ñów na.*
talk come PERF.3
"Talk has come."
'This is really something to talk about.'

b. *Wax jot na.*
talk reach PERF.3
"Talk has reached."
'The time has come to say something.' (I.e., as a result of what has happened up to a certain point in the narrative, the people in question have to speak out.)
[Jeŋ 1992]

In the imagined context for 41a above, someone has mentioned something, and someone else utters 41a in order to comment that what was just said is a juicy topic for conversation. *Wax* 'talk' stands metonymically for a new topic of conversation which has metaphorically arrived. Something new in the awareness of the interlocutors is thus construed as something present in the situation. By contrast, in 41b, *wax* 'talk' refers not to something that is construed as present, but to something that is supposed to happen at the current time. In this case, the time is construed as present but the talk is not.

The data below demonstrate an explicit connection between *jot* and the concept of event-moment pairing as expressed by *waxtu* 'hour, appointed time'. Example 42b below was given by a consultant, XB, as a reason why he

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judged 42a unacceptable. In 42b, XB says that the use of *jot* in 42a implies that there is a set time (*waxtu*) at which the child throws up. XB suggests that since children do not throw up according to a schedule, 42a does not sound right to him. What is interesting for our purposes is that fact that to say something *jot*s implies that it has an appointed or scheduled time (*waxtu*).

42) a. *#Li ma doon wax mungeey jot.*
REL.PRON 1 IMPF:PAST say 3:PRSNTTV:IMPF reach
Intended: What I was talking about is about to happen.

The following is part of XB's explanation for the unacceptability of 42a above:

b. *Day mel ni kom jamano ya xale bi di waccu*
SFOC.3 resemble like as.if time.period which child the IMPF vomit
maanaam dafa am waxtu.
that.is SFOC.3 have time
'It is as if there were a set time when the child throws up.'
[s XB, 28 Dec.]

We have now seen ample evidence for the association of the concept of event-moment pairing with *jot*. Before concluding this section, let us look at a little more evidence for the part of event-moment pairing that says that the occurrence of the time that is paired with an event entails that someone has an opportunity or obligation. Here I will present two examples of someone having an opportunity. Example 43 below is a saying which paraphrases the moral of the European fable of the tortoise and the hare.

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43) *Dara jarul di xélu. Demal ba dem jotee....*
anything be.worth:NEG AUX speed go:IMPR when go reach:ANT
"Nothing is worth speeding. Go when going has reached."
'There's no need to speed; go when it's time to go...'
[Njaga Mbay, quoted by AK, 7199]

The idea is that there is a particular time at which it is appropriate to go, and this opportunity should be taken advantage of.

The next example makes this same point, and includes overt coding of the fact that the season *tereet* is seen as providing an opportunity to a person in a particular role. This person is denoted by *yow* 'you'.

44) *Tereet jot na ci yow.*
trading.season reach PERF.3 LOCPREP you
"The trading season has reached at you."
'It's the trading season for you.' [I.e., You're ready to start selling your crops.]
[s G, 19 Nov Tape.]

In 44 above, the person for whom the trading season has occurred is understood in context to be the person whose crops are ripe and who is ready to sell them. In cases like these, the occurrence of a time has an effect on a person. This is plausibly related to the 'catch' use of *jot*. (Cf. section 7.5 and examples like *Waxtu nelaw mooy fu ma gëmméentu jote* 'Time to go to sleep is whenever sleepiness catches up with me.')

To summarize, this section (7.6) has offered evidence for the claim that *jot* has undergone a semantic extension that is partially structured by the Moving Time metaphor but not fully explainable by that metaphor.

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7.7. Summary and conclusions

Jot 'reach' instantiates the Ego-centered Moving Time metaphor as do *ñów* 'come' and *agsi* 'arrive'. But there are aspects of *jot*'s temporal meaning that are not attributable to the combination of the Moving Time metaphor and the physical semantics of *jot*. This chapter has been an attempt to describe the temporal semantics of *jot* and understand what makes *jot* particularly appropriate as a temporal term.

The first strategy for getting at the semantics of *jot* has been to compare it with *ñów* 'come', another high-frequency Wolof temporal term. The semantics of Moving Time *ñów* are largely a product of the combination of certain motion/location uses and the Moving Time metaphor. However, this is not the case with *jot*. It is possible that a more complete knowledge of Wolof metaphor and linguistic practice will enable us to say more about exactly how the mappings involved with *jot* work. But it is likely that *jot* has developed its specialized temporal meaning over centuries of evolution and thus has aspects of meaning that are not directly motivated by metaphor or inference.[18] One possibility is that in the past it was possible to use *jot* in the way *agsi* 'arrive' is currently used to comment on an arrival as it happens. Thus, temporal uses of *jot* could have been linguistically motivated in the past. In any event it seems that *jot* has become deeply entrenched as a temporal term, and temporal *jot* is understood *partially* independently of the physical senses of *jot*, though all the physical uses we have discussed are probably relevant to the temporal meaning to some extent.

Four physical uses of *jot* were identified as relevant to the 'occurrence of a time' use (section 7.5). These are i) 'achievement of manual contact', ii) 'getting to a goal', iii) 'measurement reach' and iv) 'catch'. The 'getting to a goal' use makes it possible to analyze temporal *jot* as instantiating the

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Moving Time metaphor. It is also plausible that the 'catch' use motivates the 'occurrence of a time' use via Moving Time and Event Structure metaphors. The relevance of the 'catch' use to the temporal use is evidenced by the fact that *jot* expressions sometimes portray times as having effects on people.

That there is a word in Mandinka with a polysemy structure very similar to that of *jot* supports the claim that the various uses of *jot* are semantically related and that the physical uses (i-iv) are relevant to the temporal use.

The contrast in how the ventive suffix *-si* combines with *jot* vs. with *àgg* 'arrive' is a manifestation of the fact that temporal *jot* is a specialized temporal use. This temporal specialization of *jot* is also revealed by how *jot* behaves with event subjects: the meaning of the resulting expressions is that it is *time* for the event to occur.

A satisfactory characterization requires us to recognize several semantic characteristics of *jot*'s physical uses as relevant to its temporal use. One of these is the aspectual structure of the 'manual contact' use: An act of reaching in the 'manual contact' sense can be virtually instantaneous in a way that an act of arriving is not. We can see this if we look at a description of the events in the framework of Chang, Gildea, and Narayanan 1998. In that framework, an event consists of the following stages (as summarized by Lakoff and Johnson [1999:176]; cf. Chang, Gildea, and Narayanan 1998):

> Initial state: Whatever is required in order for the event to happen.
> Start: The starting up process for the event.
> End of start: The end of the starting up process and the beginning of the main process.
> Main process: The central aspects of the event.
> Possible interruptions: Disruptions of the main process.
> Possible continuation or iteration: The perpetuation or repetition of

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the main process.

Resultant state: The state resulting from the main process.

Let us compare *jot* and *agsi* as in the examples repeated below. In the event coded by the 'manual contact' use of *jot* there is typically very little time or effort required for the agent to get from the initial state to the resultant state. When I (the addressee) reached the glass in 45a below, I paid virtually no attention to the first three stages of the event — the initial state, the start, or the end of start. The achievement of reaching and getting hold of the glass followed my desire to reach it immediately. By contrast, an event of arrival is much more protracted. Most saliently, a typical event of arrival presupposes an elaborate initial state: the state of having completed a journey (or at least some kind of translational motion). Also, an arrival has a Start stage, which we could characterize as an 'approach to the goal', and an End of start. It is only the main process of *agsi*/arrive that is aspectually comparable to that of *jot*/reach.

45) a. *Kaas bi jot nga ko léegi.*
Glass the reach PERF.2 3.OBJ now
'You have gotten hold of the glass now.' (The addressee had just taken a tea glass from a tray.) [s T, Xi:90]

b. *Sa xarit agsi na.*
your friend arrive:VEN PERF.3
"Your friend has arrived." 'Your friend is here.'

Jot is thus especially appropriate for talking and thinking about occurrences that are conceived of as instantaneous, such as the occurrence of the early afternoon prayer time as signaled by the call to prayer. Moreover, the 'manual contact' us of *jot* encodes *making contact* with the goal object rather than merely arriving in the same location. This precision in physical uses

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makes *jot* appropriate for talking about precisely when a time occurs. In the terms of Antoine Culioli (i.p.c. May 1999), *jot* codes the reaching of an *optimal threshold* (*seuil*), a precise boundary at which the realization of an event or state begins (cf. Culioli 1990:133).

Since WHEN-relations are largely a matter of measuring temporal phenomena (e.g. sequences of days), the 'measurement reach' use of *jot* is highly relevant to temporal semantics. In addition to this there is the important notion of the figural time *fitting* the ground time (Antoine Culioli i.p.c. May 1999). That is, the occurrence of a time can be thought of as a fit between the positional term that has occurred (e.g., noon) and the present moment. Here, *jot* codes both the event of reaching and the resultant state. That it names both the event and the state is another characteristic that distinguishes *jot* from *agsi* 'arrive'. The metaphorical construal of the occurrence of a time as an instance of *fitting* is particularly appropriate for times of day such as noon, and is additionally applicable to times in other contexts where the times are construed aspectually as pointlike.

To summarize, the Moving Time metaphor plus the physical uses of *jot* do not fully account for *jot*'s temporal semantics and its status in Wolof as a high-frequency temporal term. However, in spite of the fact that we cannot state explicit metaphorical mappings for them, other physical uses of *jot* are highly relevant to its temporal use.

In the next chapter we will explore a nominal use of *jot* in which it is translated as 'time', as in *have time*. We will see that while the concepts involved with Moving Time are quite similar between Wolof and English, the ones involved with *having time* are quite different.

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Notes.

[1] A *timeword* is any word that is defined relative to a temporal cycle, e.g. hour, two-thirty, day, Tuesday. *Timeword* includes *positional term* (see section 5.4) as a hyponym.
[2] I am not counting tokens of *ñów* that occurred with imperfective marking. This would skew the comparison because there are imperfective uses of *ñów* for which there is no counterpart with *jot*. An example is *Talaata bi di ñów* 'The coming Tuesday'. (*Di* is the imperfective marker).
[3] This data has led me to reconsider the claim of Moore 1997b:91 that *jot* expressions are an unmarked way of talking about the occurrence of a time. *Ñów*'s rate of occurrence is quite a bit higher in the Saloum interviews than in the published texts. I attribute this to the subject matter of the interviews.
[4] There is a morpheme in Wolof, *(w)oon*, that is traditionally called a past tense marker but in fact it is not. What it does is shift the point of reference relative to which the determination of tense is made. This is clear from the summarizing tables in Diouf and Yaguello 1991.
[5] The presentative conjugation is somewhat exceptional in this regard. Cf. Chapter 2, note 1.
[6] The idea of the whole scenario being perceivable at more or less one time is what Grady and Johnson (1997) call *temporal locality* and is an important idea in their characterization of primary scenes and subscenes.
[7] Christopher Johnson's (1998, 1999b) constructional grounding has to do with first language acquisition, but the idea is applicable to the general problem of experiential grounding.
[8] Michael Israel has pointed out (i.p.c.) that this involves scanning in Langacker's sense.
[9] This is discussed in Moore 1997b, from which some of the following discussion and examples are taken. Also, Robert 1991 describes the semantics of the Wolof perfect (*parfait*) carefully. Caron 1989 notes three other languages where a form that codes perfect tense-aspect also codes a present state. The languages are Berber, Hausa, and Fula (*peul*). Fula is placed in the Northern branch of the (West) Atlantic branch of the Niger-Congo family, along with Serer and Wolof.
[10] Croft (1998:70) actually says that *eight o'clock* is a "*Point state..., which do[es]* not involve change and [is] a point in time."
[11] The Muslim call to prayer was performed over loudspeaker five times a day. The clock where I lived chimed Christmas tunes on the hour. However, I was the only one in the area who recognized them as such. Given that I had come specifically to study "time" from the vantage point of a foreign discipline, I take this as proof that God has a sense of humor.
[12] This mapping belongs to the object branch of Event Structure (Lakoff and Johnson 1999).
[13] The diagram represents the classification on which Bendor-Samuel 1989 is based. The prevailing orthodoxy, according to Bendor-Samuel, was Greenberg's (1963) classification, in which (West) Atlantic, Mande, and Benue-Congo are all sisters descending from Niger-Congo.
[14] This Mandinka data comes from my fieldwork in The Gambia except where otherwise noted. Tone marks have been omitted from the transcriptions of my fieldwork.
[15] Not all speakers accept the *jotsi na* construction in 35, but I heard it frequently in TM. This is not just a case of regional variation, however, because some speakers from outside Saloum also accept the construction.
[16] It is possible that *-si* in 35a *Timis jotsi na* 'It's just about dusk' is actually more closely related to the use exemplified in (i) below.

i) *Maŋ fay dem-si nii.*
1:PRSNTTV there:IMPF go-VEN like.this
'I'm about to go there.'
[AK, 2.18.99]

Example (i) is aspectually comparable to 35c *Maangi maggatsi* 'I'm getting to be old.' Whereas 35c involves an event progressing toward a state which is its endpoint, (i) involves a person on an activity

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path progressing toward an expected event. In both 35c and (i), what *-si* modifies is an aspectual contour rather than physical motion. Thus even if an analysis in terms of (i) turns out to be more appropriate for 35a, my main argument that *jotsi* involves a special aspectual use of *-si* would not be substantially affected.

[17] 'Appointed time' is not given by Fal et al. as a gloss of *waxtu*.

[18] Thanks to Joe Grady for emphasizing the importance of the possibility that the motivations for temporal uses of *jot* have been obscured by diachronic change.

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8

The noun *jot*: a Wolof counterpart of *time*

8.1. Introduction.

Up to this point in the dissertation we have dealt with temporal concepts that Wolof and English share to one degree or another. In this chapter we look at an area of real-world experience in which the two languages have fundamentally different concepts. The interdependence of thought and language has been noted by many scholars (Wierzbicka 1997, Whorf 1956, Slobin 1998, Sapir 1921, 1949; Pederson et al. 1998; Lucy 1992a,b; Levinson 1996a; Lee 1996; Kay and Kempton 1984). This chapter presents an important case in which meaning must be analyzed relative to the language in which it is embedded. Thus, linguistic semantics does not follow directly from universal human experience and ability in all cases. Though meaning can differ radically from language to language, this variation is not arbitrary, as has also been noted in other areas; e.g., color terms (Kay and McDaniel 1978 etc). We will see a principled distinction between a kind of temporal concept that Wolof and English share (e.g. concepts structured by Moving Time or Event Structure metaphors) and a kind they do not share.

We will focus on the Wolof noun *jot*, which can be glossed 'time'. It typically occurs as a complement of a word like *am* 'have', *ñàkk* 'lack', or *bare* 'to be/have a lot'. An example is given below.

1) *Su ñu am-ee jot ñu saafal la.*
When we have-ANT reach we roast:BEN 2.OBJ
'When we have time we will roast [peanuts] for you.' [att.] [s, Xi:15]

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In this chapter we will explore how it is that the noun *jot*, which is related to the verb *jot* meaning 'reach' that we studied in Chapter 7, has a meaning that can be glossed with the word *time* in English and yet is fundamentally different from *time*. In order get an idea of the semantics of the noun *jot* and how it fits in with other uses, we will look at a use of *jot* in which it is an auxiliary verb. After seeing how the noun is plausibly related by metaphor to the auxiliary and the content verb *jot*, we will go into a more detailed description of the meaning and the use of the noun. Once the semantics of the noun are described, we will focus on comparing the English concepts of *having* and *wasting time* with Wolof counterpart concepts. While this chapter is essentially a study of word meaning, we will see an example of how metaphor is crucially relevant to grammar.

8.2. The auxiliary *jot*

8.2.1. The meaning of auxiliary jot.

As we shall see, a range of English expressions is required for the translation of the auxiliary *jot*, including 'manage (to do something)', 'happen, (to do something)', 'even (do something)', '(for something to happen or be the case) so far', 'end up (doing something)', '(do something) after all', and 'become' (of an inanimate change of state). Included in *jot*'s range of meanings are uses that are not readily glossable in English (cf. Munro and Gaye 1997).

The meaning of auxiliary *jot* is structured by the Event Structure metaphor PROCESSES AS LOCATIONS (cf. 6.2.2). Thus, what all of its uses have in common is the idea that the subject reached a certain point in a course of events. This point maps onto the event or state denoted by the content verb that *jot* modifies. (It is an advantage of metaphor theory that it gives us a precise way to describe these abstract semantics.)

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The examples below are ordered so that the ones that involve the most agentive involvement on the part of the subject of *jot* are listed first and those that involve the least are listed last.

2)

Manage to do something

a. *Fajar fekkul Musaa ci néeg bi, waaye*
dawn become.co-located.with:NEG Musaa LOCPREP room the, but
laata muy maase jot na fee duggu
before 3.SUBJ:IMPF become.even reach PERF.3 UL:MBA enter:MID
ci néeg bi ba tegu
LOCPREP room the to.the.point.of put:MID
ci yoonu tool wi.
LOCPREP way:PD fields the
"Dawn didn't 'find' Musaa in the room, but before it evened out, he reached in there to enter the room to the point of getting on the way to the fields."
'Musaa wasn't in the room when dawn broke, but before it ran its course he managed to enter the room and then start off to work.'
[AK]

Do such-and-such so far

b. *Li mu jot a bind lépp wesar la.*
REL 3.SUBJ reach MBA write all prose NONSUBJ.FOC.3
'Tout ce qu'il a écrit jusqu'à présent, c'est de la prose.'
"Everything he has reached to write is prose."
'Everything he has written so far is prose.' [Fal, Santos, and Doneux 1990 under *wesar*. The French translations are from the original.]

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Finally get a chance to do something

c. *Jot naa ko seeti.*
reach PERF.1 3.OBJ visit:AND
"I reached to go see him."
'I made time to go see him, I finally got to see him.'
[Munro and Gaye 1997:83 under *jot*. The translations in single quotes are from the original.]

Get a chance to do something

d. *Jot naa waxtaan ak Sam.*
reach PERF.1 talk with Sam
"I reached to talk with Sam."
'I got a chance to talk with Sam.'
[att.] [AK, 040897]

Get to do something after all

e. *Jot nga lekk ceebu jën?*
reach 2.SUBJ eat rice:PD fish
'Did you get to eat *ceebu jën* after all?'
[Munro and Gaye 1997:83 under *jot*. Translation in single quotes from original (my underlining).]

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Happen to do something

f. *Jot naa jénda suppame bu yaaxu*[1]
reach PERF.1 buy cabbage REL be.spoiled
'I reached to buy a spoiled cabbage.'
'I happened to buy a spoiled cabbage.'
(Note that the event in this case is negatively evaluated.)
[WEC International 1992:189]

Highlights the fact that the subject had a certain experience

g. *Jot na fi am doom.*
reach PERF.3 here have child
"He has reached to have a child here."
'He's had a child here.' 'He's even had a child here.'
[att.] [AK, Hai:154]

h. *Jot naa for bët.*
reach PERF.1 find eye
"I reached to find eye."
'I managed to catch a few winks.' 'I managed to sleep a bit.'
[att.] [d K, Lu:152]

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Highlights the fact that a certain thing has happened, that things have gotten to a certain point; the subject is inanimate.

i. *Ñàkk a seet dara dey li mu fi jot*
lack MBA look.for anything EMPH REL 3.SUBJ UL reach
a indi doy na sëkk.
MBA bring be.enough PERF.3 IDEO
"Failure to take things into consideration, what it has reached to bring around here is completely enough."
'Neglecting to observe certain things has brought us too much so far.'
(What the speaker (a character in a novel) means is that a lot of trouble has resulted (for the speaker and her family) from not paying attention to what was going on.)
[Jeŋ 1992:37]

j. *Ma tàngalaat ko ndax jot na fee sedd.*
1.SUBJ be.hot:CAUS:again 3.OBJ because reach PERF.3 UL:MBA cold
"I'll heat it up again because it has reached to be cold there."
'I'll heat it up again because it has gotten cold' (Talking about a cup of tea. The *jot* construction conveys the idea that there's been enough time for the tea to get cold [062599].)
[att.] [AK, Lu:101]

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k. *Yëre yi ma weeroon ci suba, jot*
clothes the.PL 1.SUBJ hang.out:PAST LOCPREP morning reach
na fee wow, te midi jotagul.
PERF.3 UL:MBA dry and noon reach:yet:NEG
"The clothes that I hung out in the morning have reached to get dry and it's not yet noon."
'The clothes that I hung out in the morning have gotten dry already and it's not yet noon.'
[AK]

8.2.2. The metaphor underlying auxiliary jot.

The metaphor underlying auxiliary *jot* is most probably PROCESSES AS LOCATIONS, which includes STATES AS LOCATIONS and ACTIVITIES AS LOCATIONS. Examples of this metaphor from section 6.6.2 are repeated below.

STATES AS LOCATIONS

3) a. *Mungi ci jàmm.*
3:PRSNTTV LOCPREP peace
"She's at peace."
'She's doing fine.'
[AK, 5699]

ACTIVITIES AS LOCATIONS

b. *Waxtu wii daaw, ñuŋ ci biir liggéey bi.*
hour this last.year 1.PL:PRSNTTV LOCPREP belly work the
"At this time last year we were inside the work."
'At this time last year we were involved in the work.' [att.] [s An:26]

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The auxiliary *jot* construction, via PROCESSES AS LOCATIONS, construes an actor, experiencer, or undergoer as an entity that occupies successive locations on a path.[2] The Source-Domain concept is the arrival coded by the 'getting to a goal' use of *jot*. In the auxiliary construction, getting to a location stands metonymically for being at the location. The location maps onto the state or activity denoted by the content verb. It is part of the semantics of the construction that the state or activity is construed perfectively. This is analogous to the perfective construal of the event of arrival in the 'getting to a goal' use discussed in section 7.5.

Support for the plausibility of the above analysis of the auxiliary *jot* construction comes from the fact that similar construals of processes as locations are found elsewhere in Wolof. The remainder of the section is devoted to providing examples of this kind of metaphorical construal.

The following example construes the relationship between an agent and the degree to which her objective is being realized as a locative relationship via PROCESSES AS LOCATIONS. This is an example of ACHIEVING A PURPOSE IS REACHING A DESTINATION (section 6.3.3.3; Lakoff and Johnson 1999), but, as we have seen, the movement in the auxiliary *jot* construction is not always purposeful.

4)

A: *Foo tollu ci sa liggéey?*
where.you be.at.a.point.equivalent.to LOCPREP your work
'Where are you at in your work?' ["What point have your reached ...?"]

B: *Àgg nañ ci xaaj bi.*
arrive PERF.1.PL LOCPREP partition the
"We've gotten to the partition." (I.e., the half-way mark.)
'We're halfway done.' [AK, 5699]

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Example 5 below says that everything the subject had undertaken is 'bogged down' or 'stuck' (*caŋ*). This is part of a construal of goal-directed activity as forward motion (which involves a construal of difficulties as impediments to motion [Lakoff and Johnson 1999].) In the next clause, the subject is said to have *entered into* debauchery. In this case, change of location maps onto change of state or activity even though the activity is not purposeful (cf. CHANGES AS MOVEMENTS in Lakoff and Johnson 1999:183).

5) *Li mu sumboon lépp caŋ na,*
REL 3.SUBJ start.a.project:PAST all be.stuck PERF.3
ndax mbal mi mu dugg.
because debauchery the 3.SUBJ enter
'Tout ce qu'il avait entrepris est bloqué, à cause de la vie de débauche dans laquelle il s'est engagé.'
'Everything that he had undertaken is bogged down because of the debauchery he has entered into.'
[Fal, Santos, and Doneux 1990 under *mbal m-*]

The section closes with a few examples of related metaphors beginning with another example of ACHIEVING A PURPOSE AS REACHING A DESTINATION.

6) a. *Sa njàngum Wolof mi, lan nga ci jublu?*
your study:PD:ART Wolof the, what 2.SUBJ LOCPREP face
"Your study of Wolof, what are you facing in it?" (Cf. *What are your studies directed toward?*)
'What's your goal in studying Wolof?'
[AK, 5699]

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MANNER OF OCCURRENCE AS MANNER OF MOVEMENT (cf. Lakoff and Johnson 1999:187 on MANNER OF ACTION IS MANNER OF MOVEMENT.)

b. *Noonu la deme.*
like.that NONSUBJ.FOC.3 go:VAL
"Like that is how it went."
'That's what happened.' 'That's how it went.'
[s T, An:35]

MEANS AS PATHS

c. *Man fan laay jaar ba am oto?*
1.EMPH where NONSUBJ.FOC.1:IMPF go.via to.the.point.of have car
"By which route will I go to the point of getting a car."
'How will I get a car?'
[AK, 5699]

8.3. The noun *jot*

8.3.1. The meaning of the noun jot *is motivated by Event Structure metaphor.*

First we will see that the semantics of the noun *jot* are distinct from those of the content verb we studied in Chapter 7. Then we will see that the noun is closely related semantically to the auxiliary. The contrast between the noun and the content-verb semantics is shown in 7 below: The fact of a time's having occurred (*jot*, the verb) does not entail that anyone "has *jot*" (the noun). The contrast between the two uses of *jot* is analogous to that between the two uses of *time* in the English gloss.

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7) *Nelaw jot na waaye awuma jotu nelaw.*
sleep reach PERF.3 but have:NEG.1 reach:PD sleep
"Sleep has reached but I don't have reach of sleep."
'It's time for sleep but I don't have time to sleep.'
[AK, 9.19.99]

By contrast, there are examples in which an auxiliary and a nominal use of *jot* are in a paraphrase relationship with each other. For example, (b) below is possible as a loose paraphrase of (a).

8) a. *Jot nañu wàŋŋarñi oto bi, waaye taaluñu ko.*
reach PERF.3.PL overturn car the but light:NEG:3.PL 3.OBJ
'Ils ont juste eu le temps de retourner la voiture, mais ils ne l'ont pas brûlée.' (The French translation is by the authors of the dictionary.)
"They reached to overturn the car, but they didn't set it on fire."
'They managed to overturn the car but they didn't get a chance to set it on fire.'
The following English translation reflects the French translation above:
'They had the time to turn the car over but they didn't get a chance to set it on fire.' [7.1.99].
[Fal, Santos, and Doneux 1990 under *wàŋŋarñi*]

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8) b. *Amoon nañu jotu wàŋŋarñi oto bi, waaye*
have:PAST PERF.3.PL JOT:PD overturn car the but
amuñu jotu taal ko.
have:NEG.3.PL JOT:PD light 3.OBJ
"They had *jot* of overturning the car but they didn't have *jot* of setting it on fire."
'They had time to overturn the car but they didn't have time to set it on fire.'
[AK, 7199]

According to what I have proposed for auxiliary *jot*, *Jot nañu wàŋŋarñi oto bi* 'they had time to turn over the car' in 8a above has to do with metaphorical movement along an activity path in which the subjects of *jot* got as far as turning over the car but not as far as an assumed farther point on the path, the point of lighting it on fire. (Presumably, the setting for the example is a riot.) The paraphrase relation between 8a and 8b makes the point that the semantics of auxiliary *jot* are closely related to those of the noun *jot*.

Because of the semantic similarity of the noun to the auxiliary *jot* as shown by 8 above, the noun *jot* appears to be partially structured by PROCESSES AS LOCATIONS. According to this proposal, having *jot* is having a kind of metaphorical "reach, scope," or "range," an ability to get to any point on an activity path that one might want to get to; that is, a metaphorical *internal* resource.[3] According to my proposal, this particular interpretation of *being able to get to any point on an activity path* is a matter of convention: On the basis of the metaphor alone, one cannot predict the actual meaning, which involves a notion something like 'leisure' or 'lack of a time limit', as opposed to one like 'skill or luck at achieving purposes'.

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8.3.2. 'Having' or 'lacking' jot

'Having' or 'lacking' *jot* is very much like *having* or *lacking time* in English. The person who has *jot* does not feel compelled to do any particular activity. This is exemplified in 9 below.

9) *... Amuloo liggéey amuloo dara loo def*
have:NEG.you work have:NEG.you anything REL.you do
— a^ — foofu moom am nga jot nag
EMPH there 3.EMPH have PERF.2 JOT PRTCLE
fim ne nii ....
where:3.SUBJ be.located like.this
'But if you don't have work, don't have any thing that you're doing -- then in that situation you've got time right now ....'
[s T, Xi:34]

By the same token, to lack *jot* is typically to have pressing obligations. A few examples of this are presented here. In the next example, the speaker who explained "having *jot*" in the above example says that being busy (at work) is a good example of *ñàkk jot* 'lacking *jot*'. The context is that I had come to visit him and found him working. The data in (a) serves as context for (b).

10) a. *Man dama bëgg, yii tã boo ñówee, fekk ma am jot ñu toog mën a waxtaan ... kom li nga def nii tey.*
"Me, I want, whatever of these times that you come, [that time] finds me having *jot* so that we can sit and talk ... like what you did like this today;"
'What I want is that whenever you come I'll have time so that we can sit and talk ... like what you just did here today.'

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b. ... *Daŋ ma fekk ci liggéey ....*

SFOC.2 1.OBJ become.co-located.with LOCPREP work

loolu yépp ci ñàkk jot la bokk.

DISCREF all LOCPREP lack JOT NONSUBJ.FOC.3 belong

"... you found me at work ... all of that is part of lacking *jot*."

'I was working when you got here ... that's an example of not having time.'

[s T, Xi:28]

The following is a spontaneous example of an utterance of *ñàkk jot*. It was uttered by someone who was in a hurry in order to get his companion to hurry up.

11) *Dama ñàkk jot rekk!*

SFOC.1 lack JOT only

"It's just that I don't have time!"

[att.] [s H, Xi:47]

The following constructed example illustrates how having *jot* is opposed to lacking *jot*.

12)

Q: *Am nga jot?*

have PERF.2 JOT

'Do you have (any) time?'

A: *Fi ma tollu dama ñàkk jot.*

where 1.SUBJ be.at.a.point.equivalent.to SFOC.1 lack JOT

'At this point I don't have (any) time.' [AK, Hai:38]

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It was mentioned above that having *jot* is having a kind of metaphorical internal *resource* or, loosely speaking, an "ability" to do what one wants. A notion of ability is involved when English speakers talk about being *able* or not being able to do something because they do or do not have time. An connection between being able to do things and having *jot* is also made by Wolof speakers, as the following example shows.

13) a. *Dimaas laay am jot, dinaa la mën*
Sunday NONSUBJ.FOC.1:IMPF have JOT, FUT.1 2.OBJ be.able
gunge sa kër bàjjan.
accompany your home aunt
'Dimanche, j'aurai le temps; je pourrai t'accompagner chez ta tante paternelle.'
'I have time on Sunday; I'll be able to go with you to your aunt's house.'
[Fal, Santos, and Doneux 1990 under *dimaas*.]

The fact that *jot* is thought of as enabling people to do things is compatible with a construal of *jot* as either an internal or external resource. I will argue that *jot* is conceived of as something that a person has internally, analogous in some ways to having the ability to reach a certain height as in the following physical use of *jot*, which I have heard more than once said by children who cannot reach things, for example a coat hook on a wall. (cf. section 7.5):

14) *Jotuma ko.*
reach:NEG.1 3.OBJ
'I can't reach it.'
[att.] [s PT]

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8.4. Time as a resource

In this section I will argue that *jot* does not denote a metaphorical external resource of the kind denoted by a certain use of the word *time* in English. The TIME AS A RESOURCE metaphor in English is discussed insightfully by Lakoff and Johnson (1980, 1999:161ff.), where it is shown that English speakers have a rich concept of what a (nonrenewable external) resource is, and that this concept is mapped onto temporal experience. The sentences in 15 below (adapted from Lakoff and Johnson 1999) are examples of how time is talked about as a resource in English.

15) I've *used up* all my time. I don't have *enough* time to do that. I *wasted* my time on that stupid piano. My time *ran out*. She *uses* her time *efficiently*. That *took three* hours *of my* time. That *took a lot* of time. It isn't *worth* my time to do that job.

The use of the word *time* in the TIME AS A RESOURCE metaphor can generally be paraphrased as 'a period of time', and generally this period of time can be measured in units, e.g. hours or days. The period of time *is* the metaphorical resource, as in *I wasted/spent three hours on that piano*. If I worked on the piano for three hours with no result then I wasted that period of time. On the other hand, if I *spent* three hours on the piano I may have gotten results that were at least *equal in value* to three hours of time — that is, *worth* the time. *Time* on this construal is a metaphorical substance that exists independently of people and is measurable in units (cf. Whorf 1956).

By contrast, *jot* does not denote a period of time, is not countable in units, and does not exist independently of the person who has it. Thus, *jot* is not construed as an external resource. Before we see the evidence for this claim, it is appropriate to discuss the TIME AS A RESOURCE metaphor a little

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more, because the nature of the metaphor will play an important role in comparisons we will make between Wolof and English temporal concepts.

The TIME AS A RESOURCE metaphor is culturally constructed to a greater degree than a metaphor like Moving Time in that it is relatively removed from direct motivation by experiential correlations (cf. Grady 1997a). In order for a people to have TIME AS A RESOURCE, there are certain ways of construing temporal experience that must also be present in their language/culture. Here are three such ways of construing temporal experience that were pointed out by Whorf in "The relation of habitual thought and behavior to language" (1956). The first of these is present in Wolof just as it is in English. The second is more ubiquitous in English in Wolof. And the third is present in English but not in Wolof.

1. "Metaphorical aggregates" (p. 139). English and Wolof quantify periods of time in the same way they quantify material individuals, e.g.:

16) a. *fukk-i nit*
ten-PD person
'ten people'

b. *fukk-i fan*
ten-PD twenty-four.hour.period
'ten days'

2. Periods of time are construed as "counted *quantities*, especially as lengths, made up of units as a length can be visibly marked off into inches" (p. 140).

Wolof, just like English, measures periods of time. But an important difference between Wolof and English involves the fact that it is hard to talk or think about duration ('length of time') in English without using a metaphorical concept of length. By contrast, as we saw in section 6.5.2, Wolof

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has a non-metaphorical verb, *yàgg*, that means 'be a long time'. An example is given below.

17) *Dégg naa seen gàddaay gi yàgg na lool.*
hear PERF.1 their exile the be.long.time PERF.3 very
'I have heard that they've been in exile for a very long time.'
[Dieng 1993:272]

As Whorf pointed out, when English speakers speak of a *length of time*, they speak as if there were an abstract, measurable substance called time, as in point (3) below. Wolof constructions with *yàgg* such as the one in 17 above avoid both the notion of *length* and the notion of a *substance* called *time*.

3. Whorf observes (p. 142) that speakers of English "have made a formless item, 'time'." In other words, for English speakers there is a measurable, mass-like substance called time. Lakoff and Johnson (1999:144-5) point out how the notion of time as a mass can be motivated by a version of Moving Time in which time is construed as a substance that flows by us.
The existence of *time* as a measurable mass-like substance in the English speaker's conceptual system is an important prerequisite for the TIME AS A RESOURCE metaphor.

Expressions based on TIME AS A RESOURCE are highly entrenched (Langacker 1987:59-60) in English. Examples are the expressions *spend the day* and *spend the night*. By contrast, Wolof expresses these notions non-metaphorically with the word *yendu* 'spend (or *pass*) the day' and *fanaan* 'spend (or *pass*) the night'. (*Yendu* is not synchronically related to any other Wolof lexeme; *fanaan* is apparently derived from *fan* 'twenty-four hour period'; cf. example 16b above.) As is the case with *yàgg* 'be a long time', in the cases of *yendu* and *fanaan*, one is forced to use metaphor to translate into English an expression that is not metaphorical in Wolof. Because the

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formless, impersonal metaphorical substance "time," is used habitually in a variety of concepts in English but not in Wolof, English is more disposed than Wolof to have the notion of time as a metaphorical external resource.

To summarize: The TIME AS A RESOURCE metaphor depends on and is a part of a cluster of concepts that vary with culture. In this way, TIME AS A RESOURCE is culturally constructed to a greater degree than Moving Time.

8.5. The properties of *jot*.

Now that we have some background on how TIME AS A RESOURCE fits into Standard English ways of talking, let us examine the characteristics of Wolof *jot* that make it like and unlike an external resource. *Jot* is grammatically treated as a substance (i.e. a mass noun as opposed to a count noun) that a person can have in large or small quantities.

In 18a below, doing a certain activity depends on having *jot*.

18) a. *Su ñu am-ee jot ñu saafal la.*
When we have-ANT JOT we roast:BEN 2.OBJ
'When we have time we will roast [peanuts] for you.'
[att.] [Xi:15] (= 1 above)

In 18b below it is explicitly stated that a certain lengthy activity requires having *jot*.

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18) b. *Waxaale wu yàgg laaj na am jot.*
bargaining REL be.long.time require PERF.3 have JOT
'Un marchandage qui dure longtemps suppose qu'on dispose de temps.'
'Bargaining for a long time requires having time.'
[Fal, Santos, and Doneux 1990 under *waxaale*.]

The next example shows a construal in which *jot* is associated with the particular activity that requires it.

c. *Awma jotu nettali la la fa xewoon*
have:NEG.1.SUBJ JOT.PD recount 2.OBJ REL there happen:PAST
lépp, dama koy lëm rekk.
all, SFOC.1 3.OBJ:IMPF summarize only
'Je n'ai pas le temps de te raconter tout ce qui s'y était passé, je t'en donne seulement un aperçu.'
'I don't have time to tell you everything that happened there; I'll just summarize it for you.'
[Fal, Santos, and Doneux 1990 under *lëm*.]

The examples in 19 below show that a person can have *jot* in large or small quantities.

19) a. *Am naa tuuti jot.*
have PERF.1 little JOT
'I have a little time.'
[AK, Ting:22]

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19) b. *Bari naa jot.*
be.plenty PERF.1 JOT
'I have a lot of time.'
[AK, Hai:38]

8.5.1. Jot *is not construed as an external resource.*

Now that we have seen that *jot* is metaphorically resourcelike, let us look at the properties that make *jot* incompatible with construal as an external resource. First, *jot* cannot be transferred from one person to another. By contrast this sort of transferability is an essential characteristic of an external resource like money or water.

Here is one speaker's response to the question of whether it would be possible to take someone else's *jot*. This contrasts with the English speaker's conception that it is possible to take someone else's time.

20)
KM: ... *Ndax dinga mën a jël jotu jaambur?*
Q FUT.2 be.able MBA take JOT.PD somebody.else
'Would it be possible to take someone else's *jot*?'

T: *Déedéet! déedéet!*
'No! No!'
[s T, Xi:35]

T expressed the following further opinions about the personal nature of *jot*.

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21) a. ... *Jot moom, mungi mel ni julli: julli,*
JOT 3.EMPH 3:PRSNTTV resemble like do.prayer do.prayer
kenn mënul julli kenn.
anyone be.able:NEG do.prayer anyone
'*Jot* is like performing the prayer, no one can perform the prayer in the place of someone else.'
[s T, Xi:35]

T's point here is that performing the prayer is each person's untransferable obligation to God, and *jot* is similarly something that pertains to the individual person. The same point is made in the next utterance.

21) b. *Sa jot mungi àndak sa jëmm.*
your JOT 3:PRSNTTV go.together with your physical.being
'Your *jot* goes along with your physical being.'
[s T, Xi:36]

According to T, two people can't partake of the same *jot* any more than they could partake of the same physical being. Next we will see evidence that, in contrast to English *time*, *jot* does not denote a period of time and it is not measurable in units. In 22a below we see that the English word *time* denotes a period of time that exists whether or not someone has it. Example (b) shows us that *jot* does not have this kind of denotation, although it is possible in Wolof to say the sort of thing that cannot be said with (b), as seen in (c).

22) a. *There is a lot of time between lunch and dinner.*

b. ?*Diggante añ ak reer am na jot gu bare.*
between lunch and dinner have PERF.3 JOT REL be.plenty
Intended: There is a lot of time between lunch and dinner.

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22) c. *Diggante añ ak reer, diir bu gudd la.*
between lunch and dinner, while REL long NONSUBJ.FOC.3
"It is a long while between lunch and dinner."
'There is a long time between lunch and dinner.'

It was mentioned that *jot* is incompatible with being construed as an external resource because it is not measurable in units. This is demonstrated by the next example: Whereas you can ask a person if she has *jot*, you cannot ask her "*how much*" *jot* she has.

22) d. *Am nga jot?*
have PERF.2 JOT
'Do you have time?'

e. *?Ñaata jot nga am?*
how.much JOT 2.SUBJ have
Intended: How much time do you have?
[AK, 061099]

Compare (e) to (f) below.

f. *Ñaata xaalis nga am?*
how.much money 2.SUBJ have
'How much money do you have?

Further evidence for this contrast between *time* and *jot* involves other kinds of constructions these words do and do not enter into. The claim that English speakers think of *time* as quantifiable is supported by the fact that the word *time* enters into possessive constructions with phrases that denote quantities of time, such as the following. (Cf. Lucy 1992b:56, Whorf 1956:141-2)

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23) a. *An hour's time*

b. *An hour of (my) time. An hour of time at the speed of light is not equal to an hour of time on the surface of the earth. I was playing the trombone for three hours of the time she was asleep...*

By contrast no such possessive or attributive phrases occur in Wolof. Thus, while we have 24a, 24b is unacceptable

24) a. *jotu waxtaan*
JOT:PD converse
'time to talk' (As in *Am naa jotu waxtaan* 'I have time to talk.')

b. *?jotu benn waxtu*
JOT:PD one hour
Intended: An hour's time.

24c below is an acceptable construction of the same form as (a) and (b), with a meaning similar to that intended for (b).

c. *diiru benn waxtu*
period.of.time:PD one hour
'a period of one hour'

Quantity is sometimes talked about in Wolof with a construction in which the quantifying expression (in this case *saam* 'pile') is possessed, as in 25a below.

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25) a. *Saamu yàpp juróom la.*
pile:PD meat five NONSUBJ.FOC.3
'A pile of meat is twenty-five francs.'

But again, *jot* does not enter into such constructions. This is exemplified in 25b.

b. *?benn waxtu*[4] *jot*
one hour JOT
Intended: One hour of time.

Based on the above evidence, it is clear that *jot* is not treated as an abstract quantifiable substance that exists independently of whether or not people have it, the way the *time* of *have time* is treated in English. *Jot* denotes neither a period of time, an entity that can be measured in units, nor a substance that exists independently of the person who has it. Thus *jot* is not construed metaphorically as an external resource.

Since the word *jot* does not provide evidence for a metaphor in which there is something like English *time* that is construed as an external resource, we can safely assume that Wolof does not have such a metaphor. This is a safe assumption because the closest thing in Wolof to *having time* is *am jot* 'having *jot*'. Other Wolof words that could conceivably provide evidence for a TIME AS A RESOURCE metaphor are not treated as resources in the appropriate way. For example, there is the word *diir* 'while, period of time' and there are examples like .... *Bëgg naa ma am diir tuuti rekk*... '...I like to have a little while [to rest]....' But people do not talk of *diir* 'while' or *waxtu* 'time, hour' as if possessing it were a prerequisite to doing things. For example, people do not say things like the following.[5]

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26) a. *?Awuma diir(u noppalu).*
have:NEG.1 period.of.time(:PD rest)
Intended: I don't have time (to rest).
[AK, 082299]

b. *?Awuma waxtu def loolu.*
have:NEG.1 time do DISCREF
Intended: I don't have time to do that.
[AK, 082299]

c. *?Awuma diiru def loolu.*
have:NEG.1 period.of.time:PD do DISCREF
Intended: I don't have time to do that.
[AK, 082299]

8.6. Wasting time

Based on the lack of a TIME AS A RESOURCE metaphor in Wolof, we would predict that Wolof would not have a conventional way of talking about 'wasting time'. This prediction is born out.

I have chosen to work with a concept like *waste* because wasting is one of the typical things that can be done with resources, and talk of *wasting time* is a typical way people employ the TIME AS A RESOURCE metaphor in English. I translate the word *waste* with the Wolof word *yàq* 'spoil, ruin, waste'. Here are some examples of *yàq*.

27) a. *Suukar day yàq bëñ.*
sugar SFOC.3:IMPF spoil tooth
'Sugar destroys teeth.' [att.] [Xi:114]

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27) b. *Suma big dafa yàqu.*
my pen SFOC.3 spoil:MID
'My pen is ruined.' (I.e., it will not write.)
[AK, 04.10.00]

c. *Yàq na alalam ci lu dul dara.*
spoil PERF.3 wealth:GEN LOCPREP REL AUX:NEG anything
'Il a gâché son argent pour rien.'
'He wasted his wealth on nothing.'
[Fal, Santos, and Doneux 1990 under *yàq*]

d. *Yaa mën a yàq xaalis.*
2.SUBJ.FOC be.able MBA spoil money
'You really know how to waste money.'
[att.] [s LD, An:164]

e. *Bëgguma yàq sam xel.*
want:NEG.1 spoil your:ART mind
'I don't want to destroy your peace of mind.' 'I don't want to {trouble your mind/confuse you/unsettle your mind}.'
[att.] [AK, 7199]

f. *Bul yàq sama xol.*
NEG:IMPR spoil my heart
'Ne me crée pas d'ennuis!'
'Don't make trouble for me.'
[Kesteloot and Dieng 1989:132]

The concept of *yàq*, like *waste* or *ruin*, involves taking something of value and rendering it devoid of benefit. In examples 27e and 27f above, it is

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the peaceful state of the mind or heart that is ruined. In these examples, the words *xel* 'mind' and *xol* 'heart' stand metonymically for 'peace of mind' and 'contentment' respectively.

Some, but not all, Wolof speakers who know French or English say that if *perdre son temps* or *waste time* is to be translated into Wolof, *yàq jot* would be the translation. Based on informant judgments and my field observations, there do not appear to be any other ways of using a word that denotes a temporal concept, e.g. the noun *diir* 'period of time, while', to talk about 'wasting time'. Moreover, other words for 'waste', like *pasar-pasaree* 'to waste' do not seem to be used for talking about time.

AK provided the following example in elicitation in order to show that it is possible to talk about wasting time in Wolof. His opinion, however, is that *yàq jot* is not something that people actually talk about in Wolof. The pound sign (#) marks this inappropriateness.

28) *#Dafa am jot rekk, moo tax mu koy*
SFOC.3 have JOT only, 3.SUBJ.FOC cause 3.SUBJ 3.OBJ:IMPF
yàq ci tele.
spoil LOCPREP television
'She has a lot of time; that's why she wastes it on television.'
[AK, Ting:130]

In spontaneous conversation (14 September 1997), in which he was paraphrasing in Wolof a document that was written in French, K translated the phrase *perdre leur temps* 'waste their time' as 29 below.

29) *yàq seen jot*
spoil their JOT
'waste their time' [d K, Lu:145]

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The idea of 'wasting time' is foreign to the Wolof language and culture, however. I have not heard the phrase *yàq jot* 'waste *jot*' used outside of elicitation contexts other than the instance just mentioned. TR, a resident of the same urban neighborhood in Senegal as K, also educated in French, did not accept the phrase *yàq jot* in elicitation. Her judgment is that Wolof speakers say *am naa jot* 'I have jot', or *awuma jot* 'I don't have *jot*', but they do not say *yàq suma jot* 'waste my *jot*'. This is the opinion of all consultants and is consistent with my observations of spontaneous use.

It seems that ideas related to *yàq jot* or "wasting time" vary a lot across speakers, and that exposure to European language and culture may have important effects on how a speaker views these concepts. As a result, some of the claims I make below could conceivably be limited to the village where I did my rural research. For that reason I will identify the village in what follows, as TM, for Tuubaa Morit.

T, the TM resident quoted above for his emphatic opinion on the "inalienability" of *jot* says that it is not appropriate to modify *jot* with *yàq*.

30)

KM: ... *Ndax nit mën na yàq jotam?*
'Is it possible for a person to waste their *jot*?'

T: *Jot moom, jot moom mant a yàqoo.*[6]
JOT 3.EMPH, JOT 3.EMPH be.able:NEG MBA spoil:MID
'*Jot* can't be wasted.'

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31) ... *Jot coobare la,*
JOT free-will NONSUBJ.FOC.3,
sa sago la.
your self-possession NONSUBJ.FOC.3
"... *Jot* is free will; it's your self-possession."
'*Jot* is a matter of your own perspective on things.' or '*Jot* is subjective.'
[s T, Xi:32] [Translation: AK, 080899]

This characterization of *jot* as subjective accords with other comments native speakers of Wolof have made and says a lot about how *jot* is different from *time*. In the Standard English mindset, if I do not have time to do something — fix your piano, say — that is an objective fact. For example, I may be working sixteen hours a day on my dissertation, and the other eight hours in the day may be completely *budgeted*. But, according to AK, a person can have *jot* even if she has obligations: she can choose to ignore them.

In Senegal, I interviewed eight people about the concept of *yàq jot* -- two city dwellers and six residents of TM. None of them recognized the phrase *yàq jot* as an ordinary phrase of Wolof. Of the six TM residents who I consulted on this question, none understood the phrase when it was first mentioned, and only one understood it before it was explained to him. Two rejected the phrase outright. One of the people who rejected it was T, whose response was given in 30 above. The response of the other person who rejected *yàq jot* is given below.

32) Yàq jot *du suñu wax ñun.*
spoil JOT IMPF:NEG our talk 1.PL.EMPH
'*Yàq jot* is not something we would say.'
[s XW, Ba:58]

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Summary

We have seen evidence that there is no Wolof equivalent to the English notion of *wasting time*. The most likely translation of *wasting time, yàq jot,* is not familiar to Wolof speakers. That Wolof speakers do not speak of "wasting" *jot* supports our earlier conclusion that *jot* is not conceptualized as an external resource.

8.7. Wolof vs. English temporal concepts.

In this section we will examine Wolof and English ways of talking about a particular area of temporal experience which the two languages structure in fundamentally different ways. The linguistic data reveal that the speakers of the different languages have different concepts regarding the area in question. This phenomenon of conceptual difference is similar to the *linguistic relativity* of Benjamin Lee Whorf (1956) and of Edward Sapir (1921, 1949). However, the analysis presented here differs significantly on some points from Whorf's analyses of relativity. Like Whorf I am claiming that certain concepts are understood only relative to the language/culture in which they are embedded. However, I am *not* claiming that language plays a role in causing conceptual differences, only that concepts may be "inextricably interwoven" with the language in which they are expressed (Sapir 1921:232[7]). Another difference is that while Whorf's work focused on grammar, I focus mostly on open-class forms.

I assume that the concepts revealed by a language have to do with the way its speakers live; i.e., their culture. Like Whorf, I take language to a part of culture (cf. Bickel to appear, Hanks 1990). Unfortunately, I will not have much to say about aspects of culture apart from language.

Each of the two languages investigated encodes the concepts of its culture in a way that the other cannot; thus, understanding conceptual structure presupposes understanding particular languages. (Cf. Wierzbicka

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1997, 1992; Lakoff 1987 Chapter 18; Lee 1996; Lucy 1992b.) To quote Whorf, (1956:66, fn. 2) "... the linguistic aspect of thinking is not a biologically organized process, 'speech' or 'language', but a cultural organization, i.e., *a* language" [original emphasis].

As we have seen, Wolof *am jot*, although it is translated as 'having time', is fundamentally different from English *having time*. Moreover, English *wasting time* does not have a conventional translation in Wolof. What I wish to show now is that there is a systematic contrast between Wolof and English conceptual structure in this area of meaning.

8.7.1. Counterpart concepts in Wolof and English.

The argument in this section proceeds by identifying certain Wolof concepts as counterparts of English concepts and then showing systematic differences between the two languages. Concepts in two languages can be considered counterparts when they structure comparable experience in some way. For example, I treat *am jot* as a counterpart of *having time* because both expressions involve "having" a temporal entity, and the two expressions can be used in similar situations, as evidenced by their equivalence in translation. In other words, *am jot* is the closest thing that Wolof has to *having time*.

Before we go into more detail, let me make it clear that I do not pretend to offer a culture-neutral analysis, or to be talking about concepts independently of how I as an English-speaker understand them. We are examining Wolof concepts as seen through the filter of English concepts. This is legitimate as long as we are conscious of what we are doing and do not forget that pondering a Wolof concept like *jot* is not the same as having it in one's own conceptual system (Lakoff 1987 Chapter 18). Also, I hope it is clear that I do not consider Wolof to be deficient in any way whatsoever by lacking the TIME AS A RESOURCE metaphor. If this paper could be written in Wolof from

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a native speaker's point of view we could treat the same issues by starting with Wolof and looking at what English lacks.

Returning to the main discussion, let us look in a little more detail at how *am jot* differs from *having time*. The *Leisure Scenario* below partially characterizes a situation in which it would be appropriate to talk about either concept.

The Leisure Scenario

There is a period of time during which Ego is free from obligations.

Following are examples of sentences in Wolof and English that are understood relative to the leisure scenario.

33) a. *Am naa jotu nelaw.*
have PERF.1 JOT:PD sleep
'I have time to sleep'

b. *Awuma jot.*
have:NEG.1 JOT
'I don't have time.' (E.g., the speaker does not have time to do some suggested activity.)

The English notion of *having time* is further structured in terms of TIME AS A RESOURCE; the Wolof notion of *am jot* is not. Thus the Wolof and English concepts are fundamentally different from each other.

Next we will see how *wasting time* also has a counterpart in Wolof from which it is fundamentally different. Thus we are dealing not only with concepts of *having time* and *wasting time* but with a semantic opposition between the two, and with a counterpart semantic opposition in Wolof.

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Wasting time is partially characterized by the *Temporal Benefit* scenario below.

The Temporal Benefit Scenario

It is assumed that whatever a person does should have some benefit. A period of time during which a person does not do anything that has an associated benefit is said to be wasted.

Something distinctive about the English notion of wasting time is that a person who is *not doing anything beneficial* is talked about in terms of the TIME AS A RESOURCE metaphor as if she were *doing something to a time period,* namely wasting it. English speakers use TIME AS A RESOURCE to construe Leisure and Temporal Benefit as aspects of a single kind of experience. Evidence for this comes from expressions like the following in which it is clear that it is the same entity "time" that is metaphorically both possessed and wasted.

- *She has time to waste*

In Wolof, people do not conventionally talk about wasting a period of time to mean what English speakers mean when they talk about *wasting time*. However, people do talk about wasting a period of time in Wolof. Expressions used in this way involve the word *jamano* 'times, time, period, era, generation', as in example 34 below.

34) *yàq sa jamano*
spoil your JAMANO
"spoil your times"
'Waste your life'

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Before discussing the concept of *yàq sa jamano*, let us look at some examples of the range of meanings of the word *jamano*. *Jamano* is typically used to talk about a period of time that is associated with someone or something, as opposed to *diir* 'while' and *yàgg* 'be a long time' whose meanings have more to do with duration *per se*. The uses of *jamano* in which it denotes a time period that is associated with a person as in examples (b) and (g) below have something important in common with the noun *jot*, in that *jot* is intimately associated with the person who possesses it.

35)

Cyclic time period

a. *Jamano jii daaw,*
JAMANO this last.year
gar nanu be noppi.
pile.peanuts PERF.1.PL to.the.point.of be.finished
'A pareille époque, l'année dernière, nous avions déjà entassé les pieds d'arachides.'
'At this time last year we had already piled the peanuts.'
[Fal, Santos, and Doneux 1990 under *gar*]

Time period of a state, event, or person

b. ...*jamano* ... *yi nga tollu di am liggéey...*
JAMANO ... REL.PL 2.SUBJ be.equivalent AUX have work
"the times that you have gotten to the point of and have work"
'the stage of your life in which you have work'
[s T]

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35) c. *sama jamano maam*
my JAMANO grandparent
'my grandparent's time.'
[s RDF, An:19]

a special case: The present times

d. *Jamano bi daal, wax dëggi yàlla,*
JAMANO the EMPH, speak truth:PD god,
doy na waar.
be.enough PERF.3 astonishment
'The times are really tough.'
[att.] [s T, An:90]

The times

The following utterance was given in answer to the question of whether RDF had studied in French school.

35) e. *Daara ji rekk ak jamano,*
Qur'anic.school the only and JAMANO,
ànd ak jamano rekk.
go.together with JAMANO only
'Just Qur'anic school and the times, just going with the times.' (RDF is saying that he got his education by studying the Qur'an, and by learning from experience in the changing world [i.e. 'going with the times'.])
[s RDF, An:15]

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Metonymically, 'life'.

35) f. *... ba* *mu* *génne* *jamano*
to.the.point.of 3.SUBJ exit:VAL JAMANO
nóf ëer *ci* *guddi*
nine o'clock LOCPREP night
"... until he exited the times at nine o'clock at night."
'... until he died at nine o'clock at night.'
[s RDF, An:11]

Generation

g. *Bokkuñu* *jamano,* *bu suñu xalaat* *wuutee*
share:NEG.1.PL JAMANO, if our thought differ:ANT
du *ma* *jaaxal.*
IMPF:NEG 1.OBJ upset
'Nous ne sommes pas de la même génération, il n'est pas étonnant que nos idées divergent.'
'We belong to different generations; if we have different ideas, that isn't hard to understand.'
[Fal, Santos, and Doneux 1990 under *jamano*]

8.7.2. Yàq sa jamano *'waste your life'.*

We now turn to a discussion of the meaning of *yàq sa jamano* 'waste your *jamano*; waste your life' and how it can be contrasted with *waste your time.* Admittedly, the sense in which *yàq sa jamano* is a counterpart of *waste your time* is very different from the sense in which *am jot* is a counterpart of *have time. Am jot* is a translation equivalent of *have time,* but *yàq sa jamano* does not translate 'waste your time'. *Yàq sa jamano* is a counterpart of *waste*

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your time in the sense that it predicates "wasting" of a period of time. What I am claiming here is a kind of structural analogy between the two concepts. I am *not* claiming that *wasting your time* and *wasting your life* are in any way analogous experiences in the two cultures.

Here is how *yàq sa jamano* was introduced spontaneously into a conversation by T.

36) *Liggéey kat* *<buñ>* *la* *ko* *joxee*
work EMPH when:3.PL.SUBJ 2.OBJ 3.OBJ give:ANT
te *respeksewuloo* *ko* *yaangi* *yàq* *sa* *jamano*
and respect:NEG.you 3.OBJ 2:PRSNTTV spoil your JAMANO
daal. *Kom* *sa* *teraanga* *la.*
EMPH since your livelihood NONSUBJ.FOC.3
'Work! If they give it to you and you don't respect it, you're wasting your life. Since it's your honor and your livelihood.'
[s T]

As T and others in TM explained it, if you do not fulfill the responsibilities of the stage of life you are in, you are wasting your *jamano*. For example if you are young and you build a reputation as a bad worker, no one will hire you, you cannot work; you are wasting your life. In addition to T who used the phrase *yàq sa jamano* spontaneously, I asked four other speakers in TM about the phrase. They all understood the phrase readily, and each of them explained it in basically the same way T did.[8]

If we look again at the scenario of Temporal Benefit (relative to which *wasting time* is understood) we can see that there is an area of overlap in what *yàq sa jamano* and *wasting your time* are used to talk about and that this area is construed differently in the two languages.

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Temporal Benefit

It is presupposed that whatever a person does should have some benefit. A period of time during which a person does not do anything that has an associated benefit is said to be wasted.

The overlap involves those cases of the Temporal Benefit scenario in which there is a specific period of time during which someone is supposed to be doing something productive. The concept of *yàq sa jamano* is partially analogous to the concept of *wasting your time* in the sense that it involves wasting such a period of time. But, whereas *time* in the relevant sense is an impersonal metaphorical resource, *jamano* in the relevant sense, like *jot*, is intimately associated with an individual. Whereas English structures notions of *Temporal Benefit* and *Leisure* in terms of an impersonal metaphorical substance (called *time)*, Wolof treats such notions as attributes or possessions of the individual person.

Potential indirect support for this characterization of Wolof concepts comes from the work of Caroline Bledsoe and William Hanks (Bledsoe [to appear]; Bledsoe and Hanks 1998). Bledsoe and Hanks have studied the attitudes of Gambian Mandinka women towards time, aging, and childbearing. There is enough prima facie similarity between Wolof and Mandinka culture in the Senegambia to make it plausible the Bledsoe and Hanks' findings are relevant to Wolof thought. (Recall the discussion of Mandinka *síi* 'reach' in section 7.5.1). What Bledsoe and Hanks have found is that Mandinka women understand their childbearing capabilities as a personal potential rather than as involving a question of a period of time with a fixed endpoint in which childbearing is possible. This is reminiscent of the understanding I have described whereby *jot* and *jamano* are understood as attributes or possessions of the individual, and whereby having *jot* is similar to having a metaphorical ability, potential, or inner resource.

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At this point, let us briefly speculate on why *jamano* can be 'wasted' or 'ruined' but *jot* cannot. While it is true that *jamano* is inherently bounded while *jot* is not, this fact does not offer a solution, since unbounded things can be 'wasted' (*yàq*) in Wolof. Money is one example of an unbounded entity that can be 'wasted' (I could be fabulously rich and waste endless amounts of money.) Another example is *xel* 'mind' as in 27e above *Bëgguma yàq sam xel* "I don't want to ruin your [peace of] mind." A more likely explanation, suggested to me by Pam Morgan, is that it is things with utility that can be 'wasted/ruined' (*yàq*). If this is correct, a person's "lifetime" is viewed as something that should be productive, but *jot* itself does not have utility. In this sense, *jot* is similar to 'leisure' — there is something odd about the idea of "wasting leisure."

To summarize, the contrasts just discussed involving *jot* and *jamano* vs. the use of the word *time* in *having* or *wasting time* are evidence that Wolof and English have fundamentally different concepts pertaining to experiences involving Temporal Benefit or Leisure. The evidence we have seen involves more than words and phrases: the semantic opposition involving *having time* vs. *wasting your time* has a counterpart in Wolof involving *am jot* vs. *yàq sa jamano*, and these English and Wolof oppositions are fundamentally different from each other. Further support for these claims comes from evidence involving borrowings from French into Wolof. Before going to that data we need to look briefly at the topic of borrowing in Wolof.

8.7.3. Borrowing

So far, I have compared Wolof and English without mentioning the massive borrowing from French into Wolof that has occurred. I have stuck for the most part to native Wolof vocabulary and Arabic borrowings because it is easier that way to demarcate a Wolof way of talking. Let me briefly discuss the issue of borrowing from Arabic in order to justify treating Arabic

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loanwords as incorporated into a "Wolof way of talking." With this as a background we will move on to the issue that is of more central interest, loanwords from French used in Wolof to talk about temporal phenomena.

Arabic borrowings are thoroughly integrated into the Wolof language. This goes along with a high degree of integration of Islam into Wolof culture; Muslim influence began in the 11th century in the northeast of Senegal (Cruise O'Brien 1971:12). Evidence that Arabic loanwords are more integrated into Wolof than French loanwords comes from the following facts. Speakers are typically not aware of Arabic loanwords as foreign whereas they often are aware of French loanwords as foreign. There are people who consciously eliminate words of French origin from their speech or writing but none that I know of do so with words of Arabic origin. In fact, people sometimes replace French loanwords with Arabic loanwords. Arabic loanwords often do not have Wolof equivalents whereas French loanwords typically do, except in cases of items of European culture like the cigarette or the automobile.

As far as temporal phenomena are concerned in Wolof, Monday through Friday have Arabic names only, and Saturday and Sunday have French names (and Wolof names known to a few). *Waxtu* 'hour, time, appointed time' comes from the Arabic root *wqt* 'time, to set a time'. *Saa* 'instant, moment' is assumed to come from Arabic *saa9ah* 'hour', and *jamano* 'times, time, period, era, generation' is assumed to come from Arabic *zamaan* 'time; duration; destiny' (cf. Wehr 1961:382).[9] *Fajar* 'dawn, first prayer' comes from Arabic *fajr* with the same gloss. *Suba* '(early) morning' comes from Arabic *subuH* with the same gloss. (Cf. Fal, Santos, and Doneux 1990, Munro and Gaye 1991.)[10] For the purposes of the current discussion, I am not making a distinction between native Wolof vocabulary and vocabulary that is borrowed from Arabic.

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8.7.4. The word tã *"time" and concepts like 'Leisure' and 'Temporal Benefit'.*

We now return to the discussion of the structure of temporal concepts in Wolof and their comparison with English concepts. In this section, we will see evidence from French borrowings that *waste your time* and *yàq sa jamano* are indeed counterparts. The data involves the frequently-occurring Wolof word *tã*, which has been borrowed from French *temps* 'time, times'.
In section 8.7.4.1 we will see how the French idiom *perdre ... temps* 'waste ... time' has been reinterpreted in TM. Section 8.4.7.2 will involve other uses of the Wolof word *tã*.

8.7.4.1. A reinterpretation of perdre ... temps *'waste ... time'.*

In this section I offer some direct evidence that *yàq sa jamano* is a counterpart to a notion like 'wasting your time' for (at least some) Wolof speakers of TM. The argument in this section hinges on the fact that the French idiom *perdre ... temps* 'waste time' has been borrowed into TM Wolof but not with the meaning of 'wasting time'.

I asked T if he knew the phrase *perdre sa temps*. I intended to be understood as using the French words *perdre* 'lose, waste' and *temps* 'time' with the Wolof word *sa* 'your', using a mix of Wolof and French of the sort that is common in Senegal.[11] T corrected me, telling me that the way to say what I was trying to say in Wolof was the phrase in (a) below, which he defined as in (b).

37) a. *perdeel sa tã*
lose:CAUS your time[12]
"waste your times"
'waste your life' [s T, Xi:36]

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37) b. Perdeel sa tã *mooy* yàq sa jamano.
lose:CAUS your time 3.SUBJ.FOC:AUX spoil your JAMANO
'*Perdeel sa tã* is "wasting/ruining your life."' (The token of *yàq sa jamano* cited in example 36 above occurred earlier in the same tape recorded interview as the example cited here.)
[s T, 103097]

One other TM resident (XW) who I consulted about the phrase *perdeel sa tã* characterized it in the way T had, and agreed that the phrase could be paraphrased as *yàq sa jamano*. The third TM resident (V) who I consulted about *perdeel sa tã* characterized it as the others had, but I do not have a record of him making a judgment on the phrase *yàq sa jamano.*

The next example further illustrates the meaning of *perdeel sa tã* and shows the semantic relatedness of Wolof *pert* 'loss' (from French *perte* 'loss') and *perdeel* 'cause to lose, cause to waste'.

The example comes from a conversation I had with XW in which he was explaining the meaning of *perdeel sa tã.* He describes a fictional scenario in which he fooled around instead of being serious and getting married like he was supposed to. Part of the conversation is given in 38 below. He sums up by asking the rhetorical question in the last line of the example: "There you have it. Isn't that loss/waste?"

38)
XW: *Waaye su fekkoon ne maangi topp àll bi di wër di dem, ëe? Awuma jabar, aa? ... Foofu doom bi ma waroon am, fan lay duggu?*

'But if I were out running around eh? I don't have a wife ah? ... How in that situation could I have the child I was supposed to have?'

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KM: *Waaw, doom bi du am.*
yes child the IMPF:NEG have
'Yes, there wouldn't be a child.'

XW: *Aa*?
'Am I right?'

KM: *Doom bi du am.*
child the IMPF:NEG have
'There wouldn't be a child.'

XW: *Mungoog. Loolu du mu doon pert?*
it's.right.there DISCREF IMPF:NEG 3.SUBJ be loss/waste
'There you have it. Isn't that loss/waste?'

Thus, *perdeel sa tã* for the speakers I consulted in TM means *yàq sa jamano* 'waste your life', not 'waste your time'. This is support for the claim made in section 8.7.2. that *yàq sa jamano* is a Wolof counterpart to *wasting your time* but codes a fundamentally different concept. It seems odd to the English speaker that 'wasting your time' should be interpreted as 'wasting your life'. I take this as mirroring the foreignness of the TIME AS A RESOURCE metaphor to the culture of TM.

AK has the European concept of 'wasting time' and he found it incredible that the meaning of *perdeel sa tã* in TM could be so different from the meaning of the French *perdre ton temps*. At the same time he agrees that *wasting time* is not a characteristically Wolof concept. AK has concepts that belong to two inconsistent conceptual systems. This highlights the contrast between *system* and *capacity* in the sense of Lakoff (1987:310): The Wolof and European concepts are incompatible on the point in question, but presumably everyone has the capacity to acquire either or both conceptual systems.[13]

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To summarize, *perdeel sa tã* "waste your *tã*" is understood as *yàq sa jamano* 'waste your life'. This concept is partially analogous to *waste your time* in that both concepts have to do with wasting a period of time. *Yàq sa jamano* and *waste your time* have different meanings because of the nature of the period of time that is assumed to be relevant in each case.

8.7.4.2. Tã, jamano, jot, *and* time

In this section I am primarily concerned with justifying the claim that *am jot* vs. *yàq sa jamano* constitute a semantic opposition that can be contrasted with the English opposition *have time* vs. *waste your time*. As I mentioned in section 8.7.1, we are taking the English opposition as a starting point in order to compare the two languages. It happens that that the English opposition *have time* vs. *waste (your) time* is culturally significant. I am not claiming any such significance for the counterpart relationship between *a m jot* and *yàq sa jamano,* nor am I claiming that the Wolof opposition is similar to the English one beyond the generic similarities already mentioned. In fact, it is crucial to my point that the Wolof and English oppositions are very different from each other.

The evidence to be presented involves the polysemous word *tã*. Whereas the discussion of *perdeel sa tã* in the previous section involved the meaning of a particular French idiom, the points made in the current section do not depend on the precise meaning of French *temps*. The discussion in sections 8.7.1 (Counterpart concepts in Wolof and English), 8.7.2, 8.7.4.1 above, and the current section, taken together, offer strong support for the claim that the Wolof and English concepts we are considering constitute fundamentally different ways of structuring comparable experience.

Tã can be used to paraphrase any of the several Wolof temporal terms exemplified below.

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Tã as *jamano* 'time, times, period, era, generation'.

39) a. *Ñun tã yooyu ñuy ñorle dugub di ñorle mboq ...*
us TÃ those we:IMPF have.ripe guinea.corn AUX have.ripe corn
weer yooyu yépp lolli *lañ ko tudde.*
month those all *lolli* NONSUBJ.FOC.3 3.OBJ name:VAL
"Those times when we have guinea corn ripe and have corn ripe ... all those months are called *lolli*."
[s G, 111997]

b. *... jamano, tã yi nga tollu di am liggéey...*
JAMANO, TÃ REL.PL 2.SUBJ be.equivalent AUX have work
"... [the] period, times that you have reached and you have work..."
'... the stage of your life in which you have work....'[14]
[s T]

Tã as *jot* 'time, chance, opportunity, leisure'.

c. *Boo amee tã, ñówal seetsi ma.*
when.you have:ANT TÃ come:IMPR visit 1.OBJ
Boo amee jot rekk.
when.you have:ANT JOT only
'When you have time, come visit me. Just when you have time.'
[att.] [s T, An:115]

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Tã as *waxtu* 'time, hour, appointed time'.

39) d. *Tã yi nga ame jot, waxtu bi nga ame jot ...*
TÃ REL.PL 2.SUBJ have:VAL JOT WAXTU REL 2.SUBJ have:VAL JOT
"The times when you have time, the time when you have time...."
'Whenever you have time....'
[s T, Xi:28]

Tã as *waxtu* 'time, hour, appointed time' or *saa* 'moment, instant'.

e. *tã bu ne*
TÃ REL be.located
"*tã* which exists"
'any time, at any moment' (I.e., in the context of the example the speaker was saying that one could go *at any time* to recover a certain sum of money that had been entrusted with a promissory note.)
[An:122]

What we are concerned with here are those uses of *tã* that paraphrase *jot* and those that paraphrase *jamano*. In particular we are interested in the following findings.

All of the TM speakers who I consulted (four out of four) agreed that *am tã* 'having *tã*' is equivalent to *am jot*. *Am tã*, in fact, is heard frequently in the meaning *'am jot'* and there is no doubt that it is entrenched in that meaning.

By contrast, speakers in TM tend to interpret *yàq sa tã* 'waste your *tã*' as meaning *yàq sa jamano*. This was the judgment of three of the four people I consulted on the matter.[15] This finding is consistent with the judgment reported above that *perdeel sa tã* can mean *yàq sa jamano*.

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Tã in *am tã* means something like *jot*, whereas *tã* in *yàq sa tã* means something like *jamano*. These data with *tã* add further support to the idea that *jot* and *jamano* denote related temporal concepts, and to the idea that these concepts can be compared in an interesting way with the English notion *time* in *have/waste time*.

Now that we have the added data involving the word *tã*, let us recapitulate the argument that TM Wolof and Standard English speakers have different concepts regarding the kind of experience partially characterized by the Leisure and Temporal Benefit scenarios. The argument goes as follows.

The first observation is that *having time* has different conceptual structure than *am jot*, since *am jot* does not involve an impersonal metaphorical substance (cf. sections 8.5 and 8.6). Moreover, there is no Wolof expression equivalent in referential value to *waste your time*. Thus English and Wolof can be compared as in Table 8.1 below.

Table 8.1

ENGLISH	Comparison of referential value	WOLOF
1) *have time*	Similar in referential value but not in conceptual structure.	*am jot* have JOT 'have time'
2) *waste your time*	Wolof does not have an expression similar in referential value to *waste your time*	zero

I have claimed, however, that *yàq sa jamano* 'waste your life' and *waste your time* have partially analogous conceptual structure in that they both involve predicating "waste" of a period of time. The data on *perdeel sa tã* add support to this argument, since a French expression that means 'waste your time' is reinterpreted as meaning *yàq sa jamano*. The data in the current

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section add further support by showing that there is a temporal entity in Wolof — *tã* — that a person can either have or waste. I.e., there is a semantic opposition involving *tã* that is partially analogous to the opposition between *having* and *wasting time*. Thus English and TM Wolof can be compared as in Table 8.2.

Table 8.2

ENGLISH	Comparison and Contrast	WOLOF
1) *have time*	Similar in referential value but not in conceptual structure	*am tã* have TÃ 'have time'
2) *waste your time*	Similar in conceptual and linguistic structure but not in referential value	*yàq sa tã* spoil your TÃ 'waste your life'

Table 8.3 below shows that the *tã* of *am tã* is (more or less) equivalent to *jot* while the *tã* of *yàq sa tã* is (more or less) equivalent to *jamano*. Given the equivalencies in Table 8.3, Table 8.4 below is roughly equivalent to Table 8.2 above.

Table 8.3: Tã *as* jot *vs.* tã *as* jamano

1) a. *am tã* have TÃ 'have time'	b. *am jot* have JOT 'have time'
2) a. *yàq sa tã* spoil your TÃ 'waste your life'	b. *yàq sa jamano* spoil your JAMANO 'waste your life'

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Table 8.4: Contrasting semantic oppositions in English and Wolof

ENGLISH	Comparison and Contrast	WOLOF
1) *have time*	Similar in referential value but not in conceptual structure	*am jot* have JOT 'have time'
2) *waste your time*	Similar in conceptual structure but not in referential value	*yàq sa jamano* spoil your JAMANO 'waste your life'

This data with *tã* is further justification, in addition to what was presented in sections 8.7.2 and 8.7.4.1, for treating the semantic opposition between *yàq sa jamano* and *am jot* as a counterpart to the opposition between *wasting time* and *having time*. I.e., there is a sense in which *am jot* is the closest thing that Wolof has to *having time* and *yàq sa jamano* is the closest thing that (TM) Wolof has to *wasting your time*. A crucial difference between the English and the Wolof semantic oppositions is the following. Whereas in English one *has* or *wastes* the same entity, *time*, in Wolof the temporal entity that one 'has' is very different from the one that one 'wastes'. Thus, (TM) Wolof speakers and (Standard) English speakers conceptualize a kind of experience having to do with Leisure and Temporal Benefit in ways that are fundamentally different. The Wolof system is characterized in terms of personal resources or attributes (*jot* or *jamano*) whereas the English system is characterized in terms of a metaphorical external resource that exists independently of people (*time*).

8.8. Conclusions

In this chapter and Chapter 7 we have seen that *jot* is highly polysemous, and that it is realized in three grammatical categories -- content

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verb, auxiliary verb, and noun. The widest range of uses occurs in the content verb where we find non-metaphorical uses of various kinds, a Moving Time use (*Midi jot na* 'It's noon'), and an Event Structure use, (*Feebar bu bon moo ko jot* 'A bad fever has afflicted her.') All of these are exemplified in section 7.5. In contrast to the case of the content verb, the auxiliary and noun have only Event Structure uses. The grammatical behavior of *jot* is a case in which metaphor theory enables a simple generalization over facts of grammar and meaning that would not otherwise be available: The auxiliary and noun uses of *jot* are based on the PROCESSES AS LOCATIONS metaphor. This constrains the meanings that the auxiliary and noun can have.

In comparing Wolof and English we have seen an interesting case in which comparable experience is structured by fundamentally different concepts. It is interesting to compare this kind of linguistic/cultural relativity with a related area of meaning in which the two languages construe things differently, but where equivalent concepts can be found in the two languages. An example involves the content verb *jot*, as studied in Chapter 7. Compare the Wolof sentence in 40 below with its English translation.

40) *Midi jot na.*
noon reach PERF.1
'It's noon.'

The Wolof and English sentences in 40 above are very different ways of saying what they say, but (at least if we ignore aspectual differences of the sort we studied in Chapter 7) there is a clear sense that they are saying the same thing, involving the following components.

i) The notion of "now" which is understood similarly in the two languages, as exemplified below by the similarity of the Wolof example and the English gloss *at this point in time.*

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41) *fi* *mu* *nekk* *nii*
where 3.SUBJ be.located like.this
"where it's at like this"
'now; at this moment; at this point in time'

ii) The notion of *noon*, which can be understood (metaphorically) in both cultures as the middle of the day. In fact the native Wolof expression for *noon* translates as *middle of the day*:

42) *diggi* *bëccëg*
middle:PD daylight.period
"middle of the day."
'noon'

This is understood in both cultures as the time of day when the sun is directly overhead, or as a certain configuration of hands on an analog clock. (Cf. section 6.4.1 on the position of the sun being in a constitutive indexical relationship with the time of day).

iii) The understanding that the current time has times which precede it and times which follow it. (In using the word *follow* I have construed the notion of sequence in terms of the FRONT/BACK Moving Time metaphor. This is also a natural construal in Wolof as we saw in section 6.6.1 with the words *jiitu* 'go ahead of' and *topp* 'follow'.)

iv) The understanding that times have things which are characteristically done at them. (This is one motivation for saying something like *It's noon*.)

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The temporal concepts in (i - iv) all presumably have cultural significance within whatever culture they are experienced, and the concepts probably do not have exactly the same value in all cultures, but it would not be surprising to find them in all cultures. Goddard and Wierzbicka and their colleagues have shown that it is plausible that the sort of notion I have characterized in (i - iv) is universal: They have documented the existence of ways of talking about a 'time when' something happens and about the relationships 'before' and 'after' in a variety of unrelated languages (Goddard and Wierzbicka 1994). Although these temporal concepts may be understood (wholly or partially) metaphorically, there is nonetheless a temporal concept involved that does not owe its entire existence to a metaphor. In this way, the concepts in (i - iv) can be said to arise more or less directly from experience and be relatively less culturally constituted than a notion like *wasting time*, in that there could be no experience of *wasting time* without the TIME AS A RESOURCE metaphor (Lakoff and Johnson 1980, 1999).

One of the main ways in which the Wolof and English versions of example 40 above differ is that in the Wolof version, the time (*midi* 'noon') is construed via the Moving Time metaphor as an entity that moves, whereas in English it is not. But notice that these do not constitute major differences in the way the occurrence of a time is conceptualized in the two languages. First, though pragmatically marked, it is possible to say *Noon has come* in English and be understood to mean 'It's noon.' Second, English has entrenched expressions with the same metaphorical structure as *Noon has come*; e.g., *The time has come.*

This similarity between Wolof and English is due to the fact that the experiential motivation of the Moving Time metaphor is direct and salient in physical experience and is likely to be part of the daily experience of people in any culture (Grady 1997a, 1999a,b; M. Johnson 1987; Lakoff and Johnson 1980, 1999; Sweetser 1990, forthcoming). This contrasts sharply with the case of TIME AS A RESOURCE, the motivation for which is not directly perceivable by the senses, and is not particularly likely to be part of daily experience

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independently of culture. The findings in this chapter thus support and illustrate suggestions by Lakoff, M. Johnson, and Grady regarding how metaphor theory predicts what kinds of concepts are likely to be crosslinguistically widespread or restricted.

We see that speakers of Standard English and speakers of TM Wolof have different concepts in the area investigated. But the concepts do not vary arbitrarily from language to language. We have seen a principled distinction between concepts which are grounded in correlations in relatively culture-independent physical experience and are shared in the two languages, vs. concepts which are not so grounded and are not so shared.

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Notes.

[1] This example is in Gambian transcription. *Yaaxu* is the same word as *yàqu* 'be spoiled'.
[2] There is a use of *jot* in which it means 'obtain' or 'receive', as in one reading of the following example. I do not give this use a full discussion because I do not think it is relevant to the Event Structure or temporal uses under discussion here.

Jot nga (ci) armoor bi?
reach PERF.2 (LOCPREP) cabinet the
'Have you gotten to the cabinet?'
'Have you gotten the cabinet?'
[Hai:151]

I am not aware of any evidence independent of *jot* for a metaphor in Wolof that would construe doing an activity in terms of having an object. An analysis of auxiliary *jot* in terms of PROCESSES AS LOCATIONS provides for the best fit with other metaphors in Wolof, and also provides for the analysis of the auxiliary *jot* constructions that is internally the most consistent. For these reasons I analyze auxiliary *jot* in terms of metaphors that involve translational motion. (Cf. Lakoff and Johnson 1999, Chapter 11 on the *Location* and *Object* Event Structure metaphors.)
[3] Thanks to Eve Sweetser for suggesting the terms *scope* and *range*. The notion of *resource* that I have in mind is similar to but not the same as the one that is used in the work of Nancy Chang, Daniel Gildea, and Srini Narayanan in their work on aspect (Chang, Gildea, and Narayanan 1998).
[4] Since *waxtu* 'hour' ends in *u*, we would not expect the 'possessed' morpheme *-u* to be suffixed to *waxtu* as it is to *saam* 'pile'.
[5] Examples like the following represent a distinct phenomenon in which one person has claims regarding what another person does during specific periods of time:

Xanaa nga dem ba liggéey bi jeex sa
evidently 2.SUBJ go to.the.point.of work the be.finished your
njaatige may la diir... lu war a mat
boss give 2.OBJ time.period REL should MBA amount.to
ñaari semen.
two:PD week.
"You go to the point of the work being finished and your boss gives you a period of time that should amount to two weeks."
'You work until the work is finished, your boss gives you a period of time ... about two weeks....'
(The boss allows you to travel for a certain period of time so you can go and visit your family.)
[s XW, An:87]

Following is another example of this sort of metaphorical possession of a period of time that is distinct from what is involved in the case of *jot*.

Am xëy laa ko ameel
ART morning.work.period NONSUBJ.FOC.1 3.OBJ owe
ngont li maa ko moom.
afternoon.work.period the 1.SUBJ.FOC 3.OBJ own
"I owe her a morning's work period; I own the afternoon work period."
'I owe her a morning's work; the afternoon is mine.'
[Fal, Santos, and Doneux 1990 under *xëy m-*]

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[6] In standard Wolof this would be *yàqu*, not *yàqoo*. It is possible that T is suffixing the valence-altering suffix *-e* to *yàqu*. In Wolof when *e* coalesces with *u* the result is *oo*.

[7] Sapir says "Language and our thought-grooves are inextricably interwoven, are, in a sense, one and the same." (1921:232)

[8] The speakers were XW, L, V, and G.

[9] For the words cited in this paragraph Fal, Santos, and Doneux (1990) note that they are from Arabic, and Munro and Gaye (1991) give the Arabic words that I cite (except that they give the noun *waqt* instead of the root *wqt*). *9* stands for the voiced pharyngeal fricative of Arabic, and *H* stands for the voiceless pharyngeal fricative.

I have never seen a justification for the claim that *jamano* is from *zamaan*.

The solar months have French names. The lunar months have Wolof names.

In many but not all cases, things that have French names in Senegal have English names in The Gambia.

[10] An intriguing suggestion that comes from these observations is that most Wolof nouns that denote temporal concepts are borrowed, and thus speakers of Wolof may have talked about temporal experience very differently before contact with Arabic or French. However, that issue is beyond the scope of this dissertation.

[11] What I actually said was *peRdë sa tā*.

[12] The root of *perdeel* is presumably **perde* 'lose, waste' from French *perdre* 'lose, waste, ruin'; or *perdi* from French *perdu* 'be lost'. Addition of the causative suffix *-al* to either form would produce *perdeel*. The form *perdal* is attested in elicitation with the same meaning of 'cause to lose'. *Tardeel* 'to make late' is a common Wolof word and may have influenced *perdeel*.

[13] It is well known that a French and Wolof are in intense contact in urban areas of Senegal, and many Wolof speakers are thoroughly bilingual in French, having begun to learn it in primary school. People like AK probably have two incommensurable conceptual subsystems in their minds for Temporal-Benefit/Leisure. These multilinguals probably have multiple systems for many other kinds of concepts as well, but I do not know of any research on this. There is nothing uncanny about people having multiple incompatible concepts of a single phenomenon. Lakoff (1987:305) for example cites many examples of this, including Gentner and Gentner's (1982) discussion of the incompatible alternate understandings of how electricity works that individual people have.

[14] Examples 35b and 39b are based on the same utterance. The two examples are the same except that the word *tā* was elided from 35b.

[15] The speaker who did not consider it felicitous to put *tā* in the place of *jamano* in the phrase *yàq jamano* was G. (The people who judged *yàq sa tā* to be equivalent to *yàq sa jamano* were XW, T, and L. T is the one who used *yàq sa jamano* spontaneously.) All four consultants were interviewed separately. Unfortunately I phrased the question to G in terms of *yàq jamano* rather than *yàq sa jamano*. I am not sure how well G understood my question, and so the data on his judgment is actually somewhat uncertain. Although none of the people I interviewed in TM speaks French, G has some knowledge of the language, and I suspect that this influenced his judgment on *yàq tā*. In fact, in the discussion from which this data from G is taken, the consultants paid considerable attention to the fact that, as they saw it, *tā* is a French word. Recall that AK found it incredible that *perdeel sa tā* could be interpreted as *yàq sa jamano*. For him *perdeel sa tā* should reflect the meaning of its French source, *perdre ton temps*. Similarly, it is to be expected that awareness of what *temps* means in French would influence any speaker to interpret *tā* in *yàq sa tā* as being more like *temps* than *jamano*.

The concepts that individuals have vary according to their experience. Thus I am not claiming that the observations made here hold for all members of the TM Wolof speech community, and certainly not for all speakers of Wolof (Cf. H. Clark 1996b). What I am characterizing here is a group of related concepts that are characteristically Wolof and not European.

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9

Conclusion

9.1. Conceptual mapping and semantic generalizations.

In this dissertation we have seen the systematic application in Wolof of spatial vocabulary to temporal reference. I hope to have shown that these patterns of temporal meaning for spatial vocabulary can be insightfully described in terms of conceptual mappings, and that these mappings express interesting lexical-semantic generalizations. The extensive systematicity and the fact that much of it is shared between Wolof and English is evidence that the observed polysemy crucially has to do with conceptual relations that go beyond the meanings of particular words. Moreover, it is significant that some of those conceptual relations are crossculturally shared.

The interest of the dissertation is not limited to matters of conceptual mapping but is concerned with meaning more generally, particularly word meaning. Thus we have been deeply concerned with lexical semantic description in its own right, following scholars such as Fillmore (1982a, 1982b, 1997/1971), Jackendoff (1983, 1990), Langacker (1987, 1991) and Talmy (1978, 1985, 1988). For example there is a group of Wolof verbs of "passing" that stand out as interesting because of their participation in temporal metaphors but are also highly worthy of study for their own sake: *paase/weesu* 'go beyond', *jàll* 'get past', *jéggi* 'get over', *romb* 'go by', and *wéy* 'continue on one's way'. These verbs encode a systematic set of distinctions of a sort not mentioned by classificatory systems like that of Talmy 1985. This set of distinctions, though it pertains to physical motion events, has to do less with motion *per se* than with the purposes and beliefs of the participants in (or conceptualizer of) the motion event. In cases like this, studying the lexicon from the perspective of conceptual metaphor theory fosters the discovery of

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interesting facts about word meanings independently of what is discovered about their metaphorical uses.

9.2. Metaphor and grammar.

Far from being a poetic phenomenon that is peripheral to the study of language, metaphor interacts in significant ways with grammar (Brugman 1983, Fleischman 1982a,b, 1989; Heine 1989 etc.; Heine, Claudi, and Hünnemeyer 1991a,b; Lakoff and Johnson 1980, 1999; Robert 1997, Sweetser 1998, 1990, 1992; etc). The interaction involves both effects of metaphor on grammar and effects of grammar on metaphor. An example in which a metaphor in a specific grammatical context is entrenched with a particular meaning in both English and Wolof involves the instantiation of the Ego-centered Moving Time metaphor with the lexeme *come* or *ñów* and imperfective aspect, as in the English and Wolof versions of the following example (from Chapter 2).

1) *dimaas bii di ñów*
Sunday this IMPF come
'this coming Sunday' 'next Sunday'
[AK, 091999]

The Moving Time expression above is appropriate for talking about the expected occurrence of a time because of certain implications involved in the event-type in which an entity moves toward Ego. If an entity is *coming*, one can infer that it is likely to arrive. Because of this inference and the metaphorical mapping involved, a word for COME in imperfective aspect is naturally capable of future reference (cf. Bybee, Perkins, and Pagliuca 1994; Fleischman 1982b, Hopper and Traugott 1993, Traugott and König 1991). This combination of metaphor and grammar results in grammatically and semantically similar expressions in English and Wolof, as in the example above. Moreover, in English at least, this kind of expression has evolved to

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have specifically temporal reference and cannot ordinarily be used in physical scenarios to mean "the X that is coming."

A case where metaphor affects grammar involves the physical scenario of *coming* just discussed in connection with example 1 above, in that vocabulary associated with that scenario is one source of future markers crosslinguistically (cf. Bybee, Perkins, and Pagliuca 1994:268; Emanatian 1992, Fleischman 1982a,b; Heine, Claudi, and Hünnemeyer 1991a). Another striking case involves the locative origins of progressive aspect in many languages (Chapter 6; Bybee, Perkins, and Pagliuca 1994; Comrie 1976). Moreover, we saw in Chapter 6 that the motivation involved in the locative origins of the progressive is also relevant to the use of locative syntax in the expression of WHEN-relations (i.e., *temporal location*). Although the details have yet to be worked out, this appears to a case in which there is a broad and systematic influence of metaphor on grammar.

Another case in which we have seen an influence of metaphor on grammar is that of the lexeme *jot* 'reach'. In this case the semantics of the auxiliary and noun uses of *jot* are motivated by Event Structure metaphor (section 8.8). Linguistic description in terms of metaphor thus allows a concise generalization about a relationship between meaning and grammatical form, and between lexical and grammatical uses of a morpheme (cf. Lichtenberk 1991).

A premise underlying the claim that metaphor can structure grammar is that understanding grammar involves the same kind of cognitive abilities as understanding experience in general, including physical experience. I argued for this premise in section 4.5.1 using as data the integration of the word *gannaaw* 'back' into the Wolof anterior construction. The claim essentially is that the anterior construction and the temporal relation it encodes are understood analogously to how the physical Ego-opposed BEHIND relation and its mapping onto temporal concepts are understood, particularly in terms of figure-ground organization (Talmy 1978).

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Metaphor influences grammar via grammaticalization — the linguistic evolution of grammatical markers from open-class words and phrases (Bybee, Perkins, and Pagliuca 1994; Fleischman 1983, Hopper and Traugott 1993, Traugott 1988, and most of the authors cited above). This is because in some cases diachronic changes are motivated by metaphor (Emanatian 1992; Fleischman 1982a,b; Heine, Claudi, and Hünnemeyer 1991a,b; Sweetser 1987, 1998, 1990). In section 3.4, I offered a metaphorical motivation for the strong tendency in various unrelated languages for adpositions meaning 'earlier than' to evolve from FRONT words and adpositions meaning 'later than' to evolve from BACK words rather than vice versa. The motivation has to do with the FRONT/BACK Moving Time metaphor, a type of Moving Time metaphor not previously recognized in the literature. More specifically, the motivation has to do with the experiential grounding proposed for the FRONT/BACK Moving Time metaphor and the fact that the temporal relation in the grounding experience is salient regardless of the point of view from which the scenario is observed. The advantage of this analysis is that it offers a reason why FRONT and BACK pair with the meanings 'earlier' and 'later' the way they do instead of the opposite way.

An important issue in the topic of experiential grounding is metonymy, which various scholars have pointed out is a potential motivating factor in the emergence of metaphor (Grady 1999b; Heine, Claudi, and Hünnemeyer 1991a,b; C. Johnson 1999a; Kövecses and Radden 1998). An example of the kind of metonymy I have in mind is *Pat got to the office ahead of Kim*, where a relationship of position stands metonymically for one of sequence (section 3.3). Heine, Claudi, and Hünnemeyer (1991a,b) have observed that metaphors sometimes appear to be motivated by a metonymic relation that is available in some contexts. This is the same phenomenon that conceptual metaphor theory characterizes in terms experiential grounding (Grady 1997a, Grady and Johnson 1997; Lakoff and Johnson 1980, 1999; Sweetser 1988, 1990; etc). Whereas Heine, Claudi, and Hünnemeyer focus on

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identifying domains that are related to each other, and directions and types of semantic change, conceptual metaphor theory is particularly concerned with the explicit details of the mappings between the Source-Domain concepts and Target-Domain concepts of a metaphor.

The detailed description of metaphors has the potential to contribute to the study of grammaticalization by improving our understanding of how experiential correlations ground metaphors which may in turn influence diachronic change (cf. Taub 1998). This in turn adds to the ability of grammaticalization theory to account for semantic relationships between grammatical items and their lexical sources (Sweetser 1987, 1988, 1990). An example of this is the development of FRONT and BACK words into adpositions mentioned above.

9.3. Philosophical issues.

The study of the FRONT/BACK Moving Time metaphor is also relevant to philosophical issues of time. Previous studies in conceptual metaphor theory have assumed that the Ego-centered Moving Time metaphor is responsible for all Moving Time expressions (e.g., Grady 1997a, Lakoff and Johnson 1999). I believe that this assumption was based on a tacit underlying assumption that for a scenario to experientially ground a Moving Time metaphor, Ego's "now" must be directly involved in the temporal relationship that constitutes the grounding experience. In other words, it was assumed that Ego must be a *participant* in the experience. I have argued that the FRONT/BACK Moving Time metaphor is grounded in an experience in which Ego *observes* a temporal relationship but does not participate in it. Inherent in my claim is the broader claim that people are able to conceptualize relationships without imagining themselves at some level as participants in the relationships. Other views of concept formation hold that concepts are ultimately grounded in experiences that involve the conceptualizer's own body (e.g. MacWhinney

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1999b). At this point we do not have sufficient evidence to decide between the competing views.

This dissertation has however demonstrated the plausibility of the claim that there are at least two distinct kinds of experience that count as temporal experience, one Ego-based and the other not. This finding is relevant to a currently prominent debate in the philosophy of time regarding *tensed* vs. *tenseless* theories of time (Le Poidevin 1998, Le Poidevin and MacBeath 1993, Oaklander and Smith 1994). If my proposal is correct, it should not be possible to resolve the debate on whether or not there is such a thing as a *tensed fact*. This is because there are two equally fundamental ways of understanding temporal experience, one of which is Ego based; i.e., "tensed", the other of which is not (cf. Lakoff and Johnson 1999).

9.4. What space is good for.

A central question that has driven the research reported on in this dissertation was inspired by Sweetser (1990:18), "...what makes space a good source domain for time vocabulary...?" We have been inching toward an answer to this question by working on a closely related question: What is it about the spatial grounding experiences we have observed that is relevant to thinking and talking about temporal experience? The answer is that in each case there is a salient correlation between a physical and a temporal aspect of a single experience (Grady 1997a, Grady and Johnson 1997, Lakoff and Johnson 1980, 1999).

Good grounding experiences for temporal metaphors involve salient correlations between physical and temporal aspects of experience rather than any directly perceived relationship between location/translational-motion *per se* and temporal phenomena. This idea can be illustrated by comparing the case of Wolof *tegu* 'be put on' with that of *topp* 'follow' (section 6.6). In the case of *topp* 'follow' we see the familiar characteristics of a temporal metaphor: autonomous linear motion from one place to another and a

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mapping in which a temporal relation is defined by direction of motion — in this case *farther in the direction of motion* maps onto *earlier*. We do not see these characteristics with *tegu* 'be put on'. For example, if one book has been placed on top of (*tegu*) another, there is not even any motion in the observed scene, although there is a salient history of motion. What the cases of *tegu* and *topp* have in common is that in each case there is an easily observable correlation between position and sequence that is salient regardless of the point of view from which it is observed. The particular spatial relations involved are not highly significant.

The case of *fekk* 'become co-located with' offers an even more striking example in which a temporal metaphor is motivated by a temporal characteristic of the grounding experience. A Source-Domain example like *Binta fekk na bool ba ca waañ wa* "Binta became co-located with the bowl in the kitchen" conveys the information that the bowl was in the kitchen when Binta arrived (section 6.7.1.1). Thus, a time of arrival serves as a temporal reference point relative to which the time of a pre-existing state (the bowl's being in the kitchen) is determined. It is this relationship between the occurrence of a time and a state, in a context of physical translational motion, that makes *fekk* appropriate for use in temporal metaphor. What is important is that the physical grounding experience has a temporal concept saliently and regularly associated with it.

As is suggested by the example just discussed, *Domains* are not separate areas of experience. Rather distinctions between domains are conceptual distinctions that may or may not have to do with distinct experiences. The grounding scenario of a metaphor involves both the Source Domain and the Target Domain. For example, all experiences of motion are also experiences of time (since time necessarily elapses while an entity is moving). The concepts of motion and location of physical entities in the grounding scenario have a special salience, and cognitive and communicative utility. That is why they serve as Source-Domain concepts in metaphorical mappings (cf. Grady 1997a;

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Grady and Johnson 1997; C. Johnson 1999a,b; Lakoff and Johnson 1980, 1999).

The entities that correspond with each other in a metaphorical mapping are not independently defined domains, but rather Source-Domain concepts that are in particular relationships with Target-Domain concepts, such as the concepts in the Ego-centered Moving Time mapping, some of which are repeated below.

SOURCE DOMAIN		TARGET DOMAIN
An entity moving toward Ego.	→	A future point or period of time.
Ego's "here."	→	Ego's "now."
Increasing proximity of mover to goal.	→	Increasing immanence of an expected time.
Arrival of entity at Ego's location.	→	Occurrence of point or period of time.

The analyst determines what the concepts that participate in a metaphorical mapping are, and what relationships they are in, by investigating the relevant linguistic data and plausible experiential groundings (Grady 1997a; Lakoff and Johnson 1980, 1999; Sweetser 1990). It is particular experience types rather than abstract domains like *space* or *time* that are most relevant to metaphorical mappings.

9.5. The effect of lexicon on metaphor.

The case of *fekk* 'become co-located with' also illustrates the effect of Source-Domain lexicon on the way metaphors are instantiated in a language. It was argued in Chapter 2 and here above that temporal characteristics of physical uses of *fekk* make it appropriate for use in the Moving Time metaphor. It was further argued in Chapter 2 that lexical characteristics of *fekk* make it appropriate for use in unmarked temporal expressions such as *Midi fekk na bool ba ca waañ wa* "Noon found the bowl in the kitchen" 'The bowl was in the kitchen at noon' (section 2.4). This contrasts with the case of English *find* in sentences like *Noon found the bowl in the kitchen*, which are

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stylistically marked. I argued that *fekk* is more appropriate in a Moving Time metaphor than *find* because *find* primarily codes a cognitive experience whereas *fekk* primarily codes an event of movement and location. Thus, issues of Source-Domain lexical semantics can affect how conceptual metaphors are instantiated in a language, and presumably also the cognitive status of metaphors among speakers of a language (section 2.5).

This example also illustrates the fact that conventional, every-day metaphoric usage and creative, novel metaphoric usage are closely related phenomena, in that (unmarked) temporal *fekk* expressions are structurally very similar to (stylistically marked) temporal *find* expressions.

9.6. Culture-specific construals and meaning in human language.

The case of *fekk* that we just saw is an example of a language/culture-specific encoding of meaning. I shall now discuss two cases that cannot be reduced primarily to issues of Source-Domain lexical semantics as *fekk* can. These have to do with the 'later than' meaning of *gannaaw* 'back' (Chapter 4), and the TIME AS A RESOURCE metaphor which involves notions like *having* and *wasting time* (Chapter 8).

In the case of 'later than' uses of *gannaaw* 'back', the Ego Opposed temporal metaphor is directly motivated by physical perceptual experience but becomes saliently relevant to temporal reference only in the context of certain communicative practices (Hanks 1990, 1996a,b). In the Ego Opposed temporal metaphor, something that is farther away from a given RP, and therefore BEHIND it, maps onto a time that is later than a given temporal RP. I argued in Chapter 4 that certain cultural scenarios of direction-giving plausibly play an important role in the experiential grounding of the Ego Opposed temporal metaphor.

In this case, the fact that the particular metaphor in question plays a role in structuring everyday talk about temporal experience depends on culture-specific communicative practices as much as it does on culture-

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independent experiential correlation. Once we accept the importance of communicative practice in motivating metaphorical language, it seems natural that many of the generalizations we make have exceptions (Chapter 5). This is because communicative practices are habits: they reflect ways that members of a speech community tend to understand and do things. Whereas linguistic *rules* might be expected to be exceptionless, the notion of *habit* does not carry that expectation. In Chapter 5 we also saw evidence that different speakers conceptualize spatial and temporal relations differently, but the variation across speakers is constrained.

In Chapter 8 we saw a different kind of cross-cultural variation, having to do with TIME AS A RESOURCE in English which involves the notions of *having* and *wasting time*, and certain counterpart concepts in Wolof. In the Wolof and English data, there is a principled contrast between a metaphor like TIME AS A RESOURCE which depends on various language- and culture-specific conditions for its existence, vs. metaphors like Moving Time or Moving Ego which are directly motivated by the sorts of correlations that might occur in the experiences of people in any culture, as far as we know. Regarding these directly motivated metaphors, Wolof and English have similar structure to a remarkable extent, and this is just what conceptual metaphor theory predicts (Grady 1999a,b; Lakoff and Johnson 1980, 1999). The theory makes the corollary prediction that TIME AS A RESOURCE should be rare in the world's languages. The absence of TIME AS A RESOURCE from Wolof supports this prediction, but many more languages need to be investigated.

9.7. Experiential correlations.

The extensive similarities between Wolof and English metaphorical temporal expressions discussed in chapters 2, 3, and 6 are evidence that this area of linguistic semantics is structured by perceptual experience (Andersen 1978, Clark 1973; Lakoff and Johnson 1980, 1999; Sweetser 1990, Traugott 1975). At the root of the similarities between metaphorical temporal expressions in

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the two languages are experiential correlations between physical and temporal components of events of motion or location. An example is the correlation that makes the grounding scenario associated with an expression like *Grandma's coming* an appropriate motivation for the Moving Time metaphor as manifested in expressions like *Christmas is coming*.

Furthermore, there is also a correlation between the grounding scenario on the one hand, and the words and linguistic constructions that can cooccur with the scenario on the other hand (cf. C. Johnson 1999a,b). This is significant in a number of ways. First, conventional linguistic framings can play a role in how the grounding scenario is understood, as I argued for the case of Wolof *fekk* 'become co-located with' in sections 2.4 and 2.5. Second, linguistic practices such as direction-giving strategies with Wolof *gannaaw* 'back' can play a role in motivating conceptual metaphors, as I argued in sections 4.4 and 4.7. These kinds of cases show that *language use* potentially plays a role in the experiential correlations that ground metaphor.

One way that language use plays such a role involves the potential for metonymic reference in grounding scenarios (C. Johnson 1999a,b; cf. also Hopper and Traugott 1993, Traugott 1988, Traugott and König 1991, Heine, Claudi, and Hünnemeyer 1991a,b). Thus, physical experiences of motion or location make appropriate grounding scenarios not only because they support cross-Domain conceptual mappings but also because Source-Domain vocabulary can be used to metonymically refer to a Target-Domain concept within the context of experiences in which the relevant metaphors are grounded. Patterns of polysemy and inference provide clear evidence that metaphorical expressions of the kind we have studied are rooted in *conceptual* metaphor. At the same time these metaphorical expressions manifest a phenomenon that is not only conceptual but also *linguistic* in important ways as we saw in the case of *fekk* 'become co-located with' and 'later than' *gannaaw* ('back').

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9.8. Culture, mind, and language.

In this dissertation we have seen a varied range of interactions between mind, language, and culture. There are cases like that of Wolof *ñów* and its English translation 'come', where commonalities in experience and lexicon lead to the Ego-centered Moving Time metaphor manifesting itself in strikingly parallel ways in the two languages. Then there are cases like that of *fekk* 'become co-located with' vs. English *find* where there are cognitive and linguistic commonalities but also important differences. Finally there is the case of TIME AS A RESOURCE in English which is fundamentally different from its counterparts in Wolof.

To a very important extent, all people live within the same physical constraints involving things like human bodies and laws of motion. At the same time there is extensive variation within those constraints. In recent work, Balthasar Bickel (to appear) has discussed the different linguistic and cultural responses to life in a mountainous region by speakers of Belhare in the Himalayas vs. speakers of Alemannic dialects of German in the Alps. Speakers of Belhare vs. Alemannic orient themselves linguistically very differently to the environment. Whereas Belhare has a system of spatial orientation based on geographic co-ordinates (UP, DOWN, ACROSS), Alemannic has a body-based system, making use of notions like FRONT, BACK, LEFT, RIGHT. Where a European language would say "your *left* foot", a Belhare speaker might say the equivalent of "your foot *across* over there", where "across" is determined according to the lay of the land. By contrast, Alemannic speakers impose body-based coordinates on geographical features, and speak of the "front" of a valley.

These are two very different linguistic responses to physical orientation. They are constrained by the physical world, but not determined by it. The situation is partially analogous to the case of English *find* compared to Wolof *fekk* 'become co-located with' as it appears in temporal expressions

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like *Midi fekku ko fa* "Noon didn't find her there" 'She wasn't there at noon'. Just as geographical features are there in the world, so are correlations in experience. And just as we have seen that Belhare and Alemannic impose different cognitive structures on the same kind of physical feature (mountainous terrain), different languages and cultures may impose different cognitive structures on what could objectively be considered the same kinds of events — e.g. the grounding scenario of the Moving Time metaphor as instantiated by English *find* vs. Wolof *fekk*. An important factor in these different impositions of cognitive structure involves habitual patterns of thought that co-occur with, and are probably influenced by, ways of speaking (Bickel to appear, Hanks 1990, Levinson 1996a etc; Lucy 1992a,b; Pederson et al. 1998, Slobin 1998 etc; Whorf 1956.).

Bickel has shown that the Belhare conceptual system that is imposed on environmental space is part of a larger cultural system that includes, for example, weaving and architectural practices: looms are installed so that the warp points uphill; and the hearth is placed in the uphill part of the house. Similarly in the case of metaphorical mappings from concepts that emerge in spatial experience onto temporal concepts, the Source-Domain concepts are part of a cultural system. We saw a good example of this in Chapter 4 involving *gannaaw* 'back', where I argued that cultural practices of direction-giving crucially inform the Source-Domain (spatial) concept that gets mapped onto the Target-Domain temporal concept. Thus, if we think of a metaphor as mapping a spatial concept onto a temporal concept, we must remember that the spatial concept may be a complex cultural concept that involves much more than what we ordinarily think of as space.

The case of English TIME AS A RESOURCE and its Wolof counterparts (discussed in Chapter 8) involves elaborate cultural structure that is imposed on temporal experience. In English, "time" is construed as a resource, but this use of the word *time* does not refer to anything in traditional Wolof experience. There is a profound linguistic and cultural relativity involved

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with this concept of *time*, and it is not surprising to find this profound relativity in a concept that is culturally constructed to such a great degree.

By contrast, it would be surprising to find such profound relativity involving a word like *come*, even though there is a great deal of crosslinguistic variation involving words with this kind of meaning. For example, a counterpart to *come* in another language might consist of two separate morphemes (i.e. movement+deixis), might make distinctions as to whether or not the mover actually arrives at the deictic center, or might make distinctions regarding whether the journey is one-way vs. round-trip (cf., e.g. Haviland 1996, Wilkins and Hill 1995, Zavala 2000), but there would still (by definition) be a common core of something like "motion toward a deictic center." I also expect that if the concepts associated with physical motion uses of a word for COME in any language map onto temporal concepts, the temporal concepts will not vary radically across languages. The reason I would expect (relative — not absolute) universality in this area is that I believe the experiential correlations that motivate Ego-centered Moving Time and those that motivate Moving Ego may be universal (cf. Sweetser forthcoming). Another important part of the view expressed here is the likelihood that the practice of indexical decentering is universal (Bickel 1997, to appear; Bühler 1990/1934; Fillmore 1982b; Hanks 1990; Haviland 1996). Obviously these are empirical questions.

The above speculations are based largely on what we have seen in the cases of Wolof and English: In the case of TIME AS A RESOURCE there is radical variation between the two languages. In the case of Moving Time there is relatively minor variation. Based on the research reported on in this dissertation, and that of researchers such as Bickel, Hanks, Haviland Levinson, Pederson et al., Regier, Slobin, Whorf, and Wilkins and Hill cited above, it seems that human conceptual systems vary in interesting and significant ways that are constrained by regularities in the world — including the structure of our brains — but not determined by those regularities.

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Abbreviations: CLAD = Centre de Linguistique Appliquée de Dakar
IFAN = Institut Fondamental d'Afrique Noire [Université de Dakar]

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