

WOLOF'S MOTION DOMAIN¹

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The syntactic and semantic expression of physical motion events constitutes a rich area of investigation for language typologists and for linguists interested in the interface between syntax and semantics (Jackendoff 1990, Talmy 1983, 1991, Goddard 1998). Crucial to the analysis of a physical motion event are the semantic elements Motion and Direction. Motion defines the act of physical displacement undertaken by a moving object relative to a location (e.g. move, go), while Direction delimits the path followed by the entity in motion (e.g. into, up, across).

Talmy's (1985) cross-linguistic analysis of motion events has identified two robust language types, V-languages and S-languages, with respect to the strategies employed in expressing Motion and Direction. V-languages conflate Motion and Direction in a single lexical item, the verb. In the French sentence *la femme traverse la rue* 'the woman crosses the street,' the verb *traverse* 'to cross' encodes Motion and Direction. S-languages, in contrast, utilize distinct syntactic categories to express Motion and Direction. Motion is expressed in a verb, while Direction surfaces as an independent grammatical form (e.g. a preposition). In the German sentence *die Frau geht über die Straße* 'the woman moves across the road,' we see Motion expressed by the verb *gehen* 'to go, move' and Direction expressed by the preposition *über* 'across, over'.²

More complex motion events involve expression of the semantic elements Manner and Cause. Within Talmy's typological framework, V-languages express Manner or Cause in constituents separate from the verb conflating Motion and Direction. Common strategies used to express Manner or Cause by V-languages include clause subordination and gerundive phrases. The latter strategy is utilized by French in the sentence *la femme traverse la rue en courant* 'the woman crosses the street by running,' in which Manner appears in the gerundive phrase *en courant* 'by running'. S-languages encode Manner or Cause along with Motion in the verb, while Direction continues to surface in a syntactically distinct category. German illustrates this strategy in the sentence *die Frau läuft über die Straße* 'the woman runs across the street,' in which the verb *laufen* 'to run' encodes Manner and Motion and the preposition *über* Direction.

Complex motion events can be further classified as expressing either transpositional or transextensional events. Transpositional events describe the ballistic displacement of a direct object (ball) but not the subject (woman), e.g. 'the woman threw the ball into the room'. Transextensional events describe the extended physical displacement of a direct object (carpet) accompanied by its subject (woman), e.g. 'the woman dragged the carpet into the room,' or of an intransitive subject (woman), i.e. 'the woman ran into the room'.

Applying the above typological framework to Wolof, a West Atlantic language of the Niger-Kordofanian phylum spoken in Senegal and the Gambia (Ka 1994, Samb 1983), leads to the emergence of two principal findings. First, Wolof evinces V-language properties by lexicalizing Motion and

¹ Data for this paper were in part collected with the assistance of a Fulbright Graduate Scholarship to Alassane Mbaye. We would also like to thank audience members of the 1999 Mid-America Linguistics Conference for their helpful comments.

² As demonstrated by the translations in (1), English has both V- and S-language properties due to borrowing (Talmy 1985).

Direction in its verbs. Second, Wolof's syntactic strategies for expressing complex motion events varies with event nature. For transpositional events (*the woman threw the ball into the room*), clause deranking is employed in which Manner or Cause appears in the main clause and Motion and Direction is expressed in a subordinate clause. For intransitive transtensional events (*the woman ran into the room*), verb serialization is used in which Manner precedes Motion and Direction. And for transitive transtensional events (*the woman dragged the carpet into the room*), a comitative construction is utilized in which Manner precedes Motion and Direction. The latter can also be expressed by the same clause level deranking strategy as found in transpositional events.

We begin our investigation of Wolof with simple motion events, those critically involving not Manner or Cause but Motion and Direction. Verbs which confirm Wolof's V-language status include *genn* 'to exit,' *wacc* 'to descend,' *yeek* 'to ascend,' *talal* 'to move along,' *jaar* 'to pass,' *wer* 'to encircle,' *uteli* 'to move toward,' and *jeggi* 'to cross.' Each of these occurs as a main verb in (1).³ The sentences below all incorporate Motion and Direction in a main clause verb.

- 1 a goor ñi genn-nañu ker gi
 man the PL exit-PERF house the SG
 'the men exited the house'
- b goor ñi wacc-nañu jaarj wi
 man the PL descend-PERF hill the SG
 'the men descended the hill'
- c goor ñi yeek-nañu jaarj wi
 man the PL ascend-PERF hill the SG
 'the men ascended the hill'
- d goor ñi talal-nañu tali bi
 man the PL move-along-PERF street the SG
 'the men moved along the street'
- e goor ñi jaar-nañu ker gi
 man the PL move-past-PERF house the SG
 'the men passed the house'
- f goor ñi wer-nañu ker gi
 man the PL encircle-PERF house the SG
 'the men encircled the house'
- g goor ñi uteli-nañu ker gi
 man the PL move-toward-PERF house the SG
 'the men moved toward the house'
- h goor ñi jeggi-nañu tali bi

³ Abbreviations used in this paper are the following: PL plural, SG singular, PERF perfective, SP subject pronoun, LOC locative, COM comitative, IP independent pronoun.

man the PL cross-PERF street the SG
the men crossed the street'

Also belonging to this class is the verb *dugg* 'to enter,' which differs syntactically from the preceding verbs. It occurs as an intransitive verb with the locative marker *ci* (2). Initially, one might assume *ci* expresses Direction and *dugg* Motion, parallel to English 'move into'.

2 goor ŋi dugg-naŋu ci bir nek bi
man the PL enter-PERF LOC inside room the SG
'the men entered the room'

However, the locative element *ci* does not express directionality. Evidence for this comes from *ci*'s use in stative-BE constructions which lack directionality (3). Constructions of this type do not convey physical movement.

3 muus mi mungɪ ci bir ker gi
cat the SG is LOC inside house the SG
'the cat is in/at the house'

Furthermore, locative *ci* is used with other non-directional prepositional constructions which serve to orient one entity relative to another. Examples include *ci kaw* 'above, on top of' and *ci suufu* 'beneath, below,' (4). These, too, appear in stative constructions.

4 a muus mi mungɪ ci kaw lal bi
cat the SG is LOC above bed the SG
'the cat is on the bed'

b muus mi mungɪ ci suufu lal bi
cat the SG is LOC beneath bed the SG
'the cat is beneath the bed'

Turning to complex motion events, we begin by evaluating Wolof's expression of transpositional events. These involve the expression of Cause along with Motion and Direction. In this domain, Wolof makes use of clause level deranking. A Cause-conveying verb appears in a main clause, while a verb which lexicalizes Motion and Direction appears in a subordinate clause. We illustrate this construction with the Cause verb *samm* 'to throw,' (5). Marking the subordinate clause is the subject pronoun *mu*.

5 a goor ŋi sanni-naŋu bal bi mu dugg ci bir nek bi
man the PL throw-PERF ball the SG SP 3SG enter LOC inside room the SG
'the men threw the ball (so that) it entered the room'/'the men threw the ball into the room'

b goor ŋi sanni-naŋu bal bi mu genn nek bi
man the PL throw-PERF ball the SG SP 3SG exit room the SG
'the men threw the ball (so that) it exited the room'/'the men threw the ball out of the room'

c goor ŋi sanni-naŋu bal bi mu wacc jaany wi
man the PL throw-PERF ball the SG SP 3SG descend hill the SG

'the men threw the ball (so that) it descended the hill'/'the men threw the ball down the hill'

- d goor ñi sannu-nañu bal bi mu uteh ker gi
man the PL throw-PERF ball the SG SP 3SG move-toward house the SG
'the men threw the ball (so that) it moved toward the house'/'the men threw the ball toward the house'
- e goór ñi sannu-nañu bal bi mu jaar ker gi
man the PL throw-PERF ball the SG SP 3SG move-past house the SG
'the men threw the ball (so that) it moved past the house'/'the men threw the ball past the house'

There are two crucial properties of this construction. The subject pronoun *mu* in the subordinate clause must refer to the direct object in the main clause, never to the subject of the main clause. Absence of *mu* produces a consecutive construction in which a series of distinct events is encoded, (6), both of which employ the same grammatical subject (*góor* both throws and exits)

- 6 goór ñi sannu-nañu bal bi genn nek bi
man the PL throw-PERF ball the SG exit room the SG
the men threw the ball (and then) they moved out of the room'

In addition, the Cause verb and the Motion+Direction verb are strictly ordered for purposes of conveying a single event. Placing the Motion+Direction conveying element before the Cause element results as well in a consecutive construction (7)

- 7 goor ñi dugg-nañu ci bur nek bi sannu bal bi
man the PL enter-PERF LOC inside room the SG throw ball the SG
'the men entered the room (and then they) threw the ball'

Intransitive transextensional events in Wolof utilize a serial verb construction. Specifically, a verb expressing Manner precedes the verb containing Motion and Direction. This strategy is illustrated with the typical Manner verb *daw* 'to run' in conjunction with one of the earlier Motion+Direction verbs (8) ⁴

- 8 a goor ñi daw-nañu dugg ci bur nek bi
man the PL run-PERF enter LOC inside room the SG
'the men ran into the room'
- b goor ñi daw-nañu génn ker gi
man the PL run-PERF exit house the SG
'the men ran out of the house'
- c goor ñi daw-nañu wacc jaanj wi
man the PL run-PERF descend hill the SG
'the men ran down the hill'
- d goor ñi daw-nañu yeek jaanj wi
man the PL run-PERF ascend hill the SG
'the men ran up the hill'

e goor ŋi daw-nañu talal tali bi
 man the PL run-PERF move-along street the SG
 'the men ran along the street'

f goor ŋi daw-nañu jaar ker gi
 man the PL run-PERF move-past house the SG
 'the men ran past the house'

g goor ŋi daw-nañu uteli ker gi
 man the PL run-PERF move-toward house the SG
 'the men ran toward the house'

h goor ŋi daw-nañu wer ker gi
 man the PL run-PERF move-around house the SG
 'the men ran around the house'

i goor ŋi daw-nañu jeggi tali bi
 man the PL run-PERF cross street the SG
 'the men ran across the street'

We conclude our analysis of Wolof's motion domain by examining transitive motion verbs. As indicated at the outset, transextensional events involve the physical displacement of an object accompanied by its subject. To express such events, Wolof employs transitive motion verb constructions which maintain the linear order of a Manner verb preceding a Motion+Direction verb. This strategy is illustrated in (9) with the verb *diri* 'to drag,' serving as an expression of Manner. Characterizing this construction is coordinate conjunction, designated by the comitative marker *ak*. This marker is suffixed to the Motion+Direction-conveying verb and serves to reinforce the notion of sustained or continuous contact between the subject and the direct object throughout the motion event. This suffixed verb form in turn is followed by an independent pronoun form, *ie moom* in (9), whose antecedent is the direct object of the main clause. *Moom* thus serves as a resumptive pronoun.

9 a goor ŋi diri-nañu tapɪ bi dugg-ak moom ci biir nek bi
 man the PL drag-PERF carpet the SG enter-COM IP 3SG LOC inside room the SG
 'the men dragged the carpet into the room'

b goor ŋi diri-nañu tapɪ bi genn-ak moom nek bi
 man the PL drag-PERF carpet the SG exit-COM IP 3SG room the SG
 'the men dragged the carpet out of the room'

c goor ŋi diri-nañu tapɪ bi utel-ak moom ker gi
 man the PL drag-PERF carpet the SG move-toward-COM IP 3SG house the SG
 'the men dragged the carpet toward the house'

⁴ A satisfactory account of intransitive transextensional events involving the permutation of Manner and Motion+Direction awaits future analysis in this particular domain.

d goor ñi diri-nañu tapı bı wer-ak moom ker gi
 man the PL drag-PERF carpet the SG move-around-COM IP 3SG house the SG
 'the men dragged the carpet around the house'

e goor ñi diri-nañu tapı bı jegg-ek moom tali bı
 man the PL drag-PERF carpet the SG cross-COM IP 3SG street the SG
 'the men dragged the carpet across the street'

With respect to its verbs, this construction observes a linearity constraint. If the verb which expresses Motion+Direction precedes the Manner verb, a consecutive construction arises in which the comitative marker no longer plays a role (10)

10 goor ñi dugg-nañu ci bur nek bı dırı tapı bı
 man the PL enter-PERF LOC inside room the SG drag carpet the SG
 'the men entered the room (and then they) dragged the carpet'

A second Wolof strategy involving transitive motion verbs reflects clause level deranking for a transpositional event. A Motion+Direction verb is found in a subordinate clause introduced by the subject pronoun *mu*, while a Cause verb appears in the main clause. In (11), *diri* 'to drag' conveys Cause, while *dugg* 'enter' or *genn* 'exit' conveys Motion+Direction.

11 a góor ñi diri-nañu tapı bı mu dugg ci bur nek bı
 man the PL drag-PERF carpet the SG SP 3SG enter LOC inside room the SG
 'the men dragged the carpet (so that) it entered the room' / 'the men dragged the carpet into the room'

b goor ñi diri-nañu tapı bı mu genn ker gi
 man the PL drag-PERF carpet the SG SP 3SG exit house the SG
 'the men dragged the carpet (so that) it exited the house'
 'the men dragged the carpet out of the house'

As with other transpositional events, the subject pronoun *mu* in a subordinate clause must refer to the direct object in the main clause, never to the subject of the main clause. Without *mu* present in the subordinate clause (12), the utterance is interpreted as two consecutive events, both of which have the same grammatical subject.

12 góor ñi dırı-nañu tapı bı genn ker gi
 man the PL drag-PERF carpet the SG exit house the SG
 'the men dragged the carpet (and then) they exited the house'

The data from this study clearly indicate that Wolof is a V-language. It consistently conflates the semantic elements Motion and Direction into a single lexical unit. Motion+Direction incorporation is maintained in constructions encoding either of the semantic concepts Manner or Cause. To express transpositional events, a Cause-bearing verb appears in the main clause while a Motion+Direction verb surfaces in a subordinate clause introduced by the subject pronoun *mu*. In intransitive transextensional events, verb serialization is employed in which the Manner verb precedes the Motion+Direction verb. For transitive transextensional events, which also involve Manner, a comitative marker *ak* is suffixed to

the Motion+Direction verb, which in turn is followed by a resumptive pronoun referring to the direct object of the main clause. This verb-suffix combination is preceded by the Manner verb.

In light of this analysis, two characteristics define the domain of all complex motion events. Motion+Direction are conflated in a single verb and a Manner- or Cause-conveying verb always precedes the Motion+Direction verb. In transitive constructions, an additional defining characteristic appears: the two elements which co-occur with the Motion+Direction verb, the subject pronoun *mu* used to mark subordinate clauses and the independent pronoun *moom* in a resumptive pronoun role, always refer to the direct object of the Manner- or Cause-conveying verb, never to the subject of the entire utterance. Used in this way, these pronouns serve to closely link a subordinate clause to its main clause. This precludes a 'consecutive event' interpretation of the entire utterance.

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