2004

A semantic sketch of spatial grams in Garifuna

Elaine Drom
San Jose State University

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_theses

Recommended Citation

Drom, Elaine, "A semantic sketch of spatial grams in Garifuna" (2004). *Master's Theses*. 2591.
DOI: <https://doi.org/10.31979/etd.nn3h-3ght>
https://scholarworks.sjsu.edu/etd_theses/2591

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

A SEMANTIC SKETCH OF SPATIAL GRAMS IN GARIFUNA

A Thesis

Presented to

The Department of Linguistics and Language Development

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Elaine Drom

May 2004

UMI Number: 1420473

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI Microform 1420473

Copyright 2004 by ProQuest Information and Learning Company.

All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

© 2004

Elaine Drom

ALL RIGHTS RESERVED

APPROVED FOR THE DEPARTMENT OF
LINGUISTICS AND LANGUAGE DEVELOPMENT

Dr. Soteria Svorou

Dr. Kevin E. Moore

Dr. Swathi Vanniarajan

APPROVED FOR THE UNIVERSITY

ABSTRACT

A SEMANTIC SKETCH OF SPATIAL GRAMS IN GARIFUNA

by Elaine Drom

Garifuna is a language spoken in Central America and is also known as Black Carib or Island Carib, from the Arawakan language family. Garifuna has had contact with French, Spanish, English, and other native Caribbean languages throughout its lifetime. Spatial grams in Garifuna are of particular interest because they have not been extensively studied. This thesis will give a semantic sketch of the eight monomorphemic spatial grams whose primary uses are for spatial relations. These include the prepositions *-ida* 'in,' *-uwagu* 'on,' *-ubadu* 'near,' *-wéi* 'from' , and *-un* 'to' and the suffixes *-rugu* 'at/in,' *-un* 'to,' and *-gien/gian* 'from.' The study of spatial grams is an important subfield of linguistic semantics, and this thesis discusses the semantics of these spatial grams following a framework of cognitive linguistics and with regard to current theories in grammaticalization.

Acknowledgements

First of all I must offer a very important thank you to PJ for all of her time, energy, and insight, and to the whole Serrano-Henry family for welcoming me into their home and making me feel like family. Thank you also to Otilia Ahad for working with me and sharing her stories. Of course, most of this thesis would not be possible without the constant help from my advisors. Thank you to Roula for her generous time, her steady and clear explanations and revisions, and for her wonderful hugs. Thank you to Kevin for his late nights reading, the many, many, many talks we've had while putting this together, for challenging me, and especially for his encouragement. And last, but not least, thank you to Swathi for his words of wisdom, support, and thoughtful comments. Thank you to Wes, and the plethora of family and friends who have had me in their thoughts and prayers during many nights of thesising and stress. As Andrea has so eloquently put it "Friends are a wonderful medicine from God that soothes not only the outer layer of that vague thing we call life, but also the innermost parts of living life day by day. Friends are God's hands, God's arms, God's feet - In part, God's way of providing for us and loving us as we do our best to live out His will here on earth." Thank you to all!

Table of Contents

1.0 Introduction.....	1
1.1 Background on Garifuna Spatial Grams	2
1.2 Theoretical background on the grammar of space	4
1.3 Methodology	7
1.3.1 Data and Consultants	7
1.3.2 Elicitation of data	9
2.0 Morphosyntactic Behavior of Spatial Grams in Garifuna	12
2.1 Morphosyntactic Behavior of Prepositions.....	12
2.1.1 Other Issues.....	14
2.2 Suffixes	16
3.0 Semantic Sketch of Spatial Grams in Garifuna	20
3.1 Prepositions.....	22
3.1.1 <i>-ida</i>	23
3.1.2 <i>-uwagu</i>	29
3.1.2.1 Spatial uses of <i>-uwagu</i>	29
3.1.2.2 Non-spatial uses of <i>-uwagu</i>	35
3.1.3 <i>-ubadu</i>	39
3.1.4 <i>-wéi</i>	42
3.1.4.1 Spatial uses of <i>-wéi</i>	42
3.1.4.2 Non spatial uses of <i>-wéi</i>	45
3.1.5 <i>-un</i>	45
3.1.5.1 Spatial uses of <i>-un</i>	45
3.1.5.2 Non-spatial uses of <i>-un</i>	47
3.2 Suffixes	48
3.2.1 <i>-rugu</i>	48
3.2.2 <i>-un</i>	54
3.2.3 <i>-gien</i>	56
3.3 Summary	59
4.0 Space in Garifuna.....	61
4.1 Boundaries and patterns of topological space.....	63
4.1.1 Areas of space coded using spatial grams.....	63
4.1.2 Areas of space coded using non-spatial grams	72
4.2 Spatial notional categories	75
4.3 Scale of topological notions.....	80
4.4 Summary	82
5.0 Conclusion	84
References.....	89
Appendix A: Approval letter from Human-Subjects Institutional Review Board.....	92
Appendix B: Comparison of Garifuna Standard Orthgraphy and IPA	93
Appendix C: Abbreviations	94
Appendix D: Transcription of data from TRPS.....	95
Appendix E: Key to Figures 2 and 3, and Appendices F, G, and H	113

Appendix F: Spatial Notional Categories on Fixed Array - Adapted from Levinson et al. (2003)	114
Appendix G: Speaker 1: Fixed Array with Garifuna Grams Outlined	115
Appendix H: Speaker 2: Fixed Array with Garifuna Grams Outlined	116

List of Tables

Table 1: Adverbial nouns from Taylor (1956a) adapted to the standard orthography	2
Table 2: Adapted from Munro (1998)	4
Table 3: P(refixing) series of pronominal marking.....	12
Table 4: <i>-ida</i> ‘in’	29
Table 5: <i>-uwagu</i> ‘on’	38
Table 6: <i>-ubadu</i> ‘near’	42
Table 7: <i>-wéi</i> ‘from’	45
Table 8: <i>-un</i> ‘to’	47
Table 9: <i>-rugu</i> ‘at/in’	53
Table 10: <i>-un</i> ‘to’	56
Table 11: <i>-gien</i> ‘from’	59
Table 12: Prepositions and Suffixes	60

List of Figures

Figure 1: Implicational scale of adpositional notions adapted from Levinson et al. (2003).....	62
Figure 2: Array of TRPS Data Arranged by Garifuna Spatial Grams	64
Figure 3: Fixed Array of data from Speakers 1 and 2 superimposed with notional categories	77

1.0 Introduction

Garifuna, also known as Black Carib or Island Carib, from the Arawakan language family, is spoken in Central America. Throughout its lifetime, Garifuna has had contact with French, Spanish, English, and other native Caribbean languages. The case of spatial grams in Garifuna is of particular interest because of the variety of syntactic forms they take and the fact that their semantic range has not yet been adequately described. Thus far, very few scholars have written on the grammar of Garifuna. The relevant syntactic information on Garifuna's spatial grams is documented by Taylor (1951, 1956a, 1965b), Pamela Munro (1997 and 1998)¹, and Ekulona (2000). The lack of a more detailed semantic description strongly motivates further investigation. This thesis is a contribution to the study of the Garifuna language, especially to the semantic and syntactic aspects of the spatial grams.

This study offers a proposal to help resolve some of the discrepancies in the labeling of Garifuna spatial grams. Along with a detailed semantic sketch of each spatial gram, this thesis describes the combinatorial mechanisms Garifuna employs to cover more complex spatial relations. The results from this study show that the semantic characterization of spatial suffixes correlate with their morphosyntactic characteristics. When compared with notional categories of semantic space, as presented in Levinson et al. (2003), the notions of IN and ON correspond to monomorphemic Garifuna spatial grams, while the notions of OVER and UNDER correspond to polymorphemic spatial

¹ Thanks to Pamela Munro for sharing her existing work on Garifuna prepositions.

grams. Also, the semantic range of the Garifuna suffix corresponding to the notion of AT raises questions about what semantic features are included in this notion

1.1 Background on Garifuna Spatial Grams

Garifuna expresses spatial relations using a variety of formal means, mostly using prepositions and suffixes, but also relational nouns; however, researchers do not all agree on the nature of these forms. Taylor (1956a) describes some of the morphemes that designate spatial relations as adverbial nouns, locative suffixes, and directional suffixes.

The adverbial nouns that he describes are²:

Table 1: Adverbial nouns from Taylor (1956a) adapted to the standard orthography	
Adverbial Noun	Translation
<i>-ábu</i>	‘behind’
<i>-árigi</i>	‘after’
<i>-áu</i>	‘on, about’
<i>-ubadu</i>	‘opposite’
<i>-uba(ra)</i>	‘in front of’
<i>-ídan</i>	‘in, among’
<i>-ugundu</i>	‘for the sake of’
<i>-úma</i>	‘accompanied by’
<i>-úrugu</i>	‘interior’
<i>-uruma</i>	‘because of’
<i>-uwagu</i>	‘upon, about/concerning’
<i>-úria</i>	‘off or away from’

Taylor probably categorized these as nouns because they also function as nouns in other environments and they take the same pronominal agreement markers that nouns take to show possession.

The locative suffixes that he recognizes as productive in the language at the time of his data collection are *-rugu* and *-uwagu*, with the suffix *-da* in fixed expressions. He

says that *-da* and *-rugu* are used together (*-da-rugu*) to mean ‘within,’ while *-uwagu* means ‘upon.’ Others, *-un* and *-gien*, which he translates as ‘to’ and ‘from’ respectively, are labeled directional suffixes. His examples show that directional suffixes affix to the adverbial nouns mentioned above, including those that already have locative suffixes. Just by looking at translations of the adverbial nouns and locative and directional suffixes, it is apparent that some of the adverbial nouns may, in fact, carry the same semantic features as locative suffixes, and may be more related than Taylor’s categories make them appear.

In contrast with Taylor’s labels, in *The People’s Garifuna Dictionary*, Cayetano (1993) has numerous words labeled as prepositions. Some of these are those adverbial nouns and affixes that Taylor (1956a) mentions; yet there are numerous others that Cayetano (1993) calls prepositions that are a combination of prepositions and affixes or other words. The dictionary produced by Cayetano functions more as a resource for Garifuna speakers than as a concise grammatical description.

Munro (1998) has the most concise description, thus far, of the morphemes Taylor calls adverbial nouns; however, similar to Cayetano, she labels them as prepositions. In this thesis, these morphemes will be called prepositions following Munro (1997, 1998). In her analysis of oblique subjects she identifies 10 basic prepositions. She lists them with the following labels:

² These data are adapted from Taylor to fit the standard orthography. This is mentioned in section 1.3.1

Table 2: Adapted from Munro (1998)	
<i>Prepositions</i>	<i>Labels using case terminology</i>
<i>ún</i>	DATIVE
<i>uwagu</i>	BENEFACTIVE
<i>áu</i>	INSTRUMENTAL
<i>úma</i>	COMMITATIVE
<i>ída</i>	LOCATIVE
<i>wéi</i>	ABLATIVE
<i>ubá</i>	AHEADATIVE
<i>ubadu</i>	NEXTATIVE
<i>arigi</i>	AFTERTIVE
<i>adûga</i>	BECAUSATIVE

Munro goes on to talk about the syntactic function of these prepositions as oblique subjects, and she also makes reference to other complex prepositions (possibly those listed in Cayetano (1993)) and suffixes (possibly those mentioned by Taylor) but limits her discussion to those mentioned above.

The discrepancies in the system of labeling these prepositions and suffixes, as well as the lack of discussion of their syntax and semantics, serve as a strong impetus for a study on the spatial grams in Garifuna.

1.2 Theoretical background on the grammar of space

The research studies by Talmy (1988, 1983), Lakoff (1987), Lakoff and Johnson (1980, 1999), Herskovits (1986), Svorou (1994), and Levinson et al. (2003) provide a description of the way languages code spatial relations within a framework of cognitive linguistics. Cognitive linguistics consciously explores the relationship of language and cognition. In particular, cognitive linguistics puts an emphasis on embodied semantics, meaning that linguistic meaning depends on the fact that we live and experience life

and in Appendix A.

through the body. Because cognitive linguistics has roots in the way humans cognize based on an embodied perception of space, it is an appropriate framework within which to conduct this study.

According to Talmy (1988), and other cognitive linguists, the study of linguistic structure gives us a way to examine conceptual structure. One of the clearest kinds of linguistic genres where we can see this correlation is in the syntactic elements languages use to talk about spatial relations. Talmy (1983) points out that morphemes used to express spatial relations are of special interest because they are usually part of a set of *closed-class* forms. *Closed-class*, as opposed to *open-class*, refers to a group of linguistic forms to which new forms are not generally added. Talmy says that by examining this set of forms within a language we can see a “skeletal conceptual microcosm” (p. 179) that describes how speakers conceptualize space.

Lakoff (1987) discusses how we construct various image schemas (e.g. the container schema or the link schema) through which our bodies interact with the world around us. With these image schemas, we then have tools to understand and talk about spatial relations. Once this is accomplished, we can map features or even whole schemas metaphorically to non-spatial relations. The outcome of this is that spatial morphemes can be used to code non-spatial relationships. Clearly, understanding what sort of spatial and non-spatial relationships are coded by certain morphemes can provide insight into conceptual structures.

Svorou (1994) uses the term *spatial gram* to refer to the linguistic form used to express a spatial relation. She observes that in different languages, these can take

different forms on a continuum of fusion from locative affixes, to free adpositional morphemes, to adverbial or adpositional phrases. Grammaticalization theory, as discussed in Heine et al. (1991), Hopper and Traugott (1993) and Svorou (2002) among many other studies, is also of importance in this study, especially in light of the constant flux that languages are in. The discrepancy in the labeling of the spatial grams in Garifuna may be a reflection of the place on the continuum that the various Garifuna grams occupy.

A recent work on the semantics of spatial notions is Levinson et al. (2003). In this paper, the researchers look at adpositions cross-linguistically to try to determine whether languages have evidence for pre-existing topological spatial notions of IN³, ON, etc. Following Piaget and Inhelder (1956), Levinson et al. define *topological* notions as those that describe containment, contiguity, or proximity. Their study seeks to find crosslinguistic evidence that supports or refutes theories that claim topological notions to be primitive. Levinson et al. did not find strong evidence for linguistic primitives for spatial relations. Rather, they found that languages cluster statistically around the notions of IN, NEAR/UNDER, ON-TOP, ON/OVER, and ATTACHMENT; however, not all languages adhere to the clusters.

Using the frameworks of cognitive linguistics and grammaticalization, this thesis will give a semantic sketch of the monomorphemic spatial grams whose primary uses are for coding spatial relations. By monomorphemic, it is meant that the root consists of only

³ Levinson et al. (2003) use all caps to refer to a loose central meaning of these notions, not specifically those coded by the English words.

one morpheme, not including the obligatory pronominal marking, which will be described in section 2.1. The set includes the prepositions *-ida* ‘in,’ *-uwagu* ‘on,’ *-ubadu* ‘near,’ *-wéi* ‘from,’ and *-un* ‘to’ and the suffixes *-rugu* ‘at/in,’ *-gien* ‘from,’ and *-un* ‘to.’ Polymorphemic spatial grams often combine the schemas of the individual morphemes that they consist of, and will be discussed briefly in the description of the suffixes involved; however, their detailed description is outside the scope of this study. The monomorphemic spatial grams given above often describe similar spatial scenes, and thus necessitate the description of their individual scope as well as discussion when the scopes of different grams may overlap. This thesis will sketch the semantics of these spatial grams in detail by describing the semantic scope for the spatial use of each morpheme. In some cases, the non-spatial uses will be described, but the focus will remain on spatial uses. The system of spatial grams in Garifuna will then be discussed as a whole to see what methods are employed by Garifuna speakers to talk about space and to see if Garifuna spatial grams correlate with any pre-defined spatial notions.

1.3 Methodology

1.3.1 Data and Consultants

Data used for this paper were provided by two female adult native speakers of Garifuna from Dangriga, Belize.⁴ The data are presented in the standard orthography in order to follow the standard set by researchers working on the language (see Appendix B for the correspondences of the standard Garifuna orthography, adapted from Cayetano (1993), to IPA). In glossing the examples, the spatial grams in question will be

represented by the same form in small capitals, instead of with their English equivalents,⁵ with the hope that this study will provide a better labeling system for these morphemes. Glosses will follow the current trends in Garifuna research based on the work of Taylor (1956a, 1956b), Munro (1998), Ekulona (2000), Cayetano (1993), and responses from the consultants. See Appendix C for a list of abbreviations for the glosses. Since the focus of the study was on the inventory of spatial grams and the constructions they participate in, less attention was paid to the analysis of other parts of the sentence. Consequently, some examples may not be fully glossed as far as the morpheme-by-morpheme analysis is concerned.

According to Taylor (1977), as cited in Ekulona (2000), the canonical stress patterns in Garifuna are such that stress falls on the first syllable if a word has two syllables and the second syllable if the word has three or more syllables. The examples of data will be presented following the standard orthography with stress marked only where the stress is not canonical.⁶ It should also be noted here that there are phonological and morphological variations across dialects. In addition, it is common for Garifuna speakers to omit syllables. Though the standard orthography is being used to describe the data, it is being used to faithfully represent the speech of the consultants without any attempt at standardization.

⁴ Clearance from the Human Subjects Institutional Review Board at San Jose State University is included in Appendix A.

⁵ The morphemes which it is not clear how to gloss will be glossed by the same form in capitals.

⁶ Stress will be marked by an acute accent on the vowel, except in the case of the letter *ü* where this thesis will follow Ekulona (2000) and use *û*.

1.3.2 Elicitation of data

Data for this study were collected in two ways. The first of these will be referred to as ‘general elicitation.’ Only one speaker was used for this method of elicitation. These elicitation sessions were conducted by asking the Garifuna speaker to translate sentences from English to Garifuna or to describe a spatial scene in Garifuna. The spatial scene could have consisted of something visible in the elicitation environment or a hypothetical scene. Because most Garifuna speakers are multilingual, multilingualism could still play a role in the semantics of the Garifuna forms elicited, even if the elicitation sessions had been conducted monolingually.

The second method of data collection used an elicitation booklet developed by Melissa Bowerman,⁷ Penelope Brown, and Eric Pederson, which was used in Levinson et al. (2003). The booklet consists of pictures of two objects in various spatial arrangements, one of which was highlighted yellow. The highlighted object is meant to be described with reference to the non-highlighted object. To refer to these objects, this thesis will follow Talmy (1983) using the terms from Gestalt psychology, *Figure* and *Ground*, Figure being the entity that attention is focused on, and Ground being the reference object. There are seventy-one pictures in the booklet depicting various topological spatial relations, and it is therefore called the Topological Relations Picture Series (TRPS). The author also drew five pictures similar to those in the TRPS to use as a practice set for the participants to familiarize them with the process.

Data was gathered with the TRPS from both speakers.⁸ Each participant was asked to describe the location of the highlighted object with respect to the secondary object(s) in the picture. The participation was given the example that if the picture was that of a flower in a vase, the participant would describe the location of the flower with regards to the vase as if answering the question ‘Where is the flower?’ Once the participant understood the process, the procedure continued with all the five practice pictures. After the number of the picture was read aloud, the participant described the spatial scene in Garifuna, translated the sentence into English, and waited for the number of the following picture to be read aloud. If the participant did not provide a locative description of the Figure, the participant was again prompted with a question similar to ‘Where is the *Figure*?’. After the practice session, the same process was repeated for the entirety of the booklet (see Appendix D for a transcription of the data from the TRPS).

Due to the fact that only two speakers were used for this study, the analyses presented here should be taken as preliminary and an impetus for further investigation. Despite this fact, the data set was analyzed as follows. Pictures were often described with responses like ‘The cup is on the table,’ ‘The cat is sitting on the mat,’ or ‘The leaf is on the top of the branch.’ In some cases, the participants provided more details about the picture. A more fine-grained distinction should of course be considered, but due to the limited scope of this study, and following Levinson et al. (2003), this study focuses only on the primary spatial grams and not on the more detailed spatial codings. For

⁷ Many thanks to Melissa Bowerman at the Max Plank Institute in Nijmegen, The Netherlands for sending this set of pictures and allowing it to be used in this study.

example, if the description of a picture was ‘The cup is on the table next to the plate,’ the primary spatial relation to be focused on is that of ‘the cup is on the table.’

In order to categorize the data, each picture was associated with the primary spatial gram used. In some cases, a spatial gram was not used. These pictures were excluded from the discussion of how spatial grams in Garifuna function to cover spatial notions; however, their use in Garifuna’s system as a whole is addressed. The few occurrences of suffixes were included to see how they fit into the system as a whole, and were organized schematically based on the type of spatial relation they coded. This method allows us to see the similar spatial scenes that each spatial gram can code as well as the distinctions between them.

Using these two methods of elicitation and data analysis allows for Garifuna to be compared crosslinguistically with other languages for which the TRPS has been used. It also allows flexibility for more specific questions to be asked about spatial grams or other grammatical constructions in Garifuna.

Chapter 2 will provide a syntactic description of Garifuna prepositions and suffixes, while Chapter 3 will describe the semantic scope of each spatial gram in question. Chapter 4 follows with a discussion of how the Garifuna spatial gram system functions as a whole, and Chapter 5 will summarize the findings of this thesis.

⁸ This study will refer to these speakers as Speaker 1, for whom the general elicitation and TRPS elicitation were conducted, and Speaker 2 for whom only the TRPS elicitation was conducted. All of the data shown in the text is from Speaker 1, unless otherwise marked.

2.0 Morphosyntactic Behavior of Spatial Grams in Garifuna

The spatial grams in this study can be classified as prepositions or suffixes based on their morphosyntactic behavior. The morphemes *-ida*, *-uwagu*, *-ubadu*, *-wéi*, and *-un* behave as prepositions,⁹ and the morphemes *-rugu*, *-un*, and *-gien/gian* behave as suffixes. The morphemes *-ida* and *-uwagu* have also been observed to function as suffixes.

2.1 Morphosyntactic Behavior of Prepositions

As explained in Munro (1998), prepositional phrases in Garifuna are made up of a preposition with a pronominal prefix that agrees with its object, that is to say, it exhibits head-marking morphology. The prefixing paradigm used is one that is also used on verbs and nouns. Because there are multiple verbal affixing paradigms, Munro labels this series the P(refixing)-series. It is as follows:¹⁰

Table 3: P(refixing) series of pronominal marking	
1 st person singular	n-
2 nd person singular	b-
3 rd person singular masculine	l-
3 rd person singular feminine	t-
1 st person plural	w-
2 nd /3 rd person plural	h(a)-

When the P-series is used on nouns, it functions as the possessive and agrees with the possessor of the object in person, and in gender for the third person singular. The verbal usage needs much more description and discussion but is outside the scope of this thesis.

⁹ For the use of – (indicating affixation) see section 2.1.

If the object is expressed by an overt noun, then it follows the preposition, but it is not obligatory, unlike the pronominal prefix, which is obligatory with all prepositions.¹¹ This is a classical feature of head-marking languages. The noun phrase object of the preposition, when present, further specifies the location of the Figure. When the object is known by both speakers, it is usually omitted. To illustrate the behavior of prepositions, note the example of the prepositional phrases '*l-uwagu n-iada*' and '*t-uwagu*' in the following examples:

- (1) *l-ni-he* *aba* *fiyuti* *l-uwagu* *n-iada*
 exist-I3ms-exist one cut P3ms-UWAGU P1s-leg
 'I have a cut on my leg'

Picture 45

- (2) *gi-tu* *idibu* *gibe-ti* *furudu t-uwagu*
 GI-T3fs tree many-T3ms fruit P3fs-UWAGU
 'The tree blossomed well, there is a lot of fruit on it.'

Example (1) shows the prepositional phrase consisting of the preposition followed by its object. The noun *iada* 'leg' is masculine and therefore the preposition *-uwagu* has the 3rd person masculine singular prefix. This example also illustrates the use of the P-series on the noun *n-iada* to show possession. Example (2) describing Picture 45 illustrates how the object of the preposition does not have to be coded by a lexical noun, but rather the preposition simply carries the pronominal prefix, which has an antecedent outside the locative construction.

¹⁰ Note: Ekulona (2000) notes a distinct 2nd person plural marker for all pronominal agreement, but this distinction seems to have been collapsed with the 3rd person plural in the dialect of the speakers used in this

2.1.1 Other Issues

Another element that can be part of a prepositional phrase is a quantifier.

Garifuna does not have a productive plural morpheme for inanimates,¹² and thus cannot simply pluralize the noun referring to the Ground. Multiple Grounds are handled by using the quantifiers *buri* ‘all,’ *sun* ‘all,’ *bandi* ‘several/large amount,’ *saragu* ‘many’ or *kara* ‘each’ before the noun. For example:

- (3) *aganawa-tina t-ida* *saragu* *muna*
 dwell-T1s P3fs-IDA many house
 ‘I lived in a lot of houses’

These quantifiers are not obligatory, but if the distinction between singular and plural needs to be made, Garifuna will code it by syntactically juxtaposing the quantifier.

Two of the morphemes investigated in this thesis, *-ida* and *-uwagu*, that function as prepositions can also appear as suffixes on nouns. Taylor (1956a) mentions the suffix *-da*, which appears to correspond to the preposition *-ida* because of their semantic and phonological similarity on two nouns namely, ‘house’ and ‘street.’ These two environments were able to be replicated with the current consultants, but unable to find any other nouns to which it affixes. Here are the two examples of *-ida* or *-da*, as a suffix:

- (4) *n-adurugububa-dibu muna-da*
 P1s-meet-D2s house-IDA
 ‘I’ll meet you at home’

study.

¹¹ Munro (1998) addresses the exception to this obligation in her discussion of oblique subjects.

¹² Munro (1998) footnotes that Kaoru Ohta has shown that only animates distinguish between singular and plural.

- (5) *laramayun-ia uma-da-rugu*
 stand-prog road-IDA-RUGU
 ‘I’m standing in the street’

The infrequency of this behavior could be due to *-ida/da* having been a productive suffix at one time, perhaps when Taylor was investigating the language, but now it may remain only in fixed expressions like those above. The phrase ‘in the house’ is likely to be used frequently, and it is understandable for it to be subject to fossilization. This alternation may also occur due to dialect variation.

The other example of a morpheme that can function both as a preposition and as a suffix is that of *-uwagu*. Taylor (1956a) also gives this as a suffix, but again, the data for this study have only shown it being used with very few nouns like ‘head’ and ‘side.’ For example:

- (6) *a-ni-he l-óba-wagu le yura letanina gárada*
 exist-I3ms-exist P3ms-side-UWAGU this shelf ‘for holding’ book
 ‘It is next to the bookshelf.’
- (7) *I-ni-he aba biti n-uchugu-wagu*
 exist-I3ms-exist one cut P1s-forehead-UWAGU
 ‘There is a cut on my forehead.’

Example (7) coexists with the following:

- (8) *I-ni-he aba fiyuti l-uwagu n-ichugu*
 exist-I3ms-exist one scratch P3ms-UWAGU P1s-forehead
 ‘There is a scratch on my forehead’

Examples (7) and (8) are semantically similar but differ syntactically in the function of *-uwagu* as a suffix or a preposition. The two uses of *-uwagu* appear to be in free

variation; however, this is not generally the case because it is not possible to affix *-wagu* to every noun.

Due to the restricted use of *-ida* and *-uwagu* as suffixes, and the fact that the words used with the suffix variation are extremely common, ‘house,’ ‘head’ etc, it is clear that the process of grammaticalization is at work. However, it is unclear whether this is the end of grammaticalization and the expressions above are results of a process that may have been productive at one time, but the behavior now tends to remain in fixed expressions. These expressions may have been learned more recently by Garifuna speakers as units. It is also possible that this is the beginning of the grammaticalization of these prepositions, and they are starting to appear in a reduced form on very common words. At this point, the data are not clear as to whether the alternation of spatial grams functioning as prepositions and as suffixes is syntactic or semantic, or at what stage of grammaticalization this represents.

2.2 Suffixes

The spatial suffixes that will be discussed in this thesis are *-rugu*, *-un*, and *-gien/gian*. These suffixes differ syntactically from prepositions because they cannot take pronominal marking.¹³ For example, the first of these, *-rugu*, appears as a suffix on nouns as in:

(9)	<i>i-ni-he</i>
exist-I3ms-exist
‘He is in the room’ | <i>somburu-rugu</i>
room-RUGU |
|-----|---|----------------------------------|

¹³ The spatial gram *-un* does take pronominal marking when functioning as a preposition; however, its suffix function is differentiated by the lack of pronominal marking and the affixation at the end of a word.

Example (10) below is ungrammatical and shows that *-rugu* cannot be used as a preposition:

- (10) *i-ni-he* **lu-rugu* *somburu*
 exist-I3ms-exist **P3ms-RUGU* room
 ‘He is in the room’

The suffix *-rugu* can also combine with other suffixes, either after *-ida* (in suffix form *-da*), as in:

- (11) *I-ni-he* *muna-da-rugu*
 exist-I3ms-exist house-IDA-RUGU
 ‘He is in the house’

or with the directional suffix *-gien* or its alternate *-gian* following it as in:

- (12) *n-ebugu-ya* *dabiyara-rugu-gian*
 P1s-walk-prog forest-RUGU-GIEN
 ‘I’m walking through the forest’

The suffix *-rugu* can combine with the following relational noun to form a complex preposition meaning ‘inside.’ The data have not shown other examples with this behavior of *-rugu*, so additional data is needed to see how productive *-rugu* is in creating complex prepositions.

Picture 14 – Speaker 2

- (13) *i-ni-he* *katei* *t-uragei-rugu* *posu*
 exist-I3ms-exist something P3fs-belly-RUGU purse
 ‘There is something inside the purse.’

The suffixes *-un* and *-gien*, which Taylor (1956a) calls directional suffixes and translates as ‘to’ and ‘from’ respectively, are affixed onto nouns, including those already having suffixes, to show direction or to form complex prepositions. They also combine with monomorphemic prepositions to form complex prepositions. The differences

between the use of *-un* and *-gien* are semantic and will be discussed in detail in Chapter

3. Below are some examples of the syntactic environments of *-un*.

(i) Suffix onto noun stem that ends in a suffix:

- (14) *beluha-ru* *muna-da-un*
 go-D3fs house-IDA-UN
 ‘She has gone into the house’

(ii) Suffix on noun forming a complex preposition:

- (15) *u-bei* *l-abu-n* *dábula*
 put-imp P3ms-behind-UN table
 ‘Put in under the table.’

(iii) Suffix on monomorphemic preposition forming a complex preposition:

- (16) *i-nu-gura* *ilena* *l-ubad-un* *dábula*
 leave-I3fs-leave Elaine P3ms-UBADU-UN table
 ‘Elaine went next to the table’

Examples of the syntactic environments of *-gien* are below.

(i) Suffix onto noun stem that ends in a suffix:

- (17) *u-nu-gura* *muna-da-gien*
 leave-I3fs-leave house-IDA-GIEN
 ‘She went away from the house.’

(ii) Suffix on monomorphemic noun:

- (18) *balisi-gian* *niabi*
 belize-GIEN 1sg.pro
 ‘I’m from Belize’

- (19) *be-ba* *ya-gien*
 go-imp here-GIEN
 ‘Get out of here.’ Lit: ‘Go away from here.’

(iii) Suffix on noun forming a complex preposition:

- (20) *i-nu-hu* *iliena l-oba-gian* *dábula*
 exist-I3fs-exist Elaine P3ms-side-GIEN table
 ‘Elaine is next to the table.’

(iv) Suffix on monomorphemic preposition forming a complex preposition:

- (21) *aba eibu la t-ída-gien muna*
 then walk LA P3fs-ÍDA-GIEN house
 ‘He walked out of the house.’

As is evident from the data above, the syntactic behavior of spatial prepositions and suffixes in Garifuna is very diverse. According to Svorou (2002), Hopper and Traugott (1993), and Heine et al. (1991), the various factors that show the degree of grammaticalization are morpho-phonological reduction, loss of autonomy, and loss of obligatory marking. From the morphosyntactic behavior alone, it is clear that the suffixes are far more grammaticalized than the prepositions because of their reduced and bound form. As we move into the focus of this study, the semantic description of these spatial grams will also support the notion of Garifuna spatial suffixes as more grammaticalized than its prepositions. We will also gain more semantic insight into this fascinating system.

3.0 Semantic Sketch of Spatial Grams in Garifuna

The previous section has described the syntactic behavior of prepositions in Garifuna. This section, after reviewing the different ways spatial grams have been analyzed by Talmy (1983), Herskovits (1986), Lakoff (1987), Vandeloise (1994), Tyler and Evans (2001), and Garrod et al. (1999), will explore the semantic behavior and scope of the prepositions *-ida*, *-uwagu*, *-ubadu*, *-wéi*, and *-un* and the suffixes *-rugu*, *-un*, and *-gien*.

According to Talmy (1983), a basic spatial scene consists of a description of the location of one object with reference to another object. As mentioned in section 1.3.2 Talmy uses terms from Gestalt psychology to refer to the object of focus as the *Figure* and the reference object as the *Ground*. In order to examine the kind of semantics that a spatial gram codes, Talmy discusses what factors may be salient in any spatial scene. Some of these factors are the geometries of the Figure and Ground, their shape, their magnitude, and whether or not they are discrete or continuous.

Herskovits (1986) examines the uses of ‘at,’ ‘in’ and ‘on’ in English and determines that there is some geometric ideal that represents the spatial scene described by the preposition. She says that this ideal may be manifested in various ways, but the essence of the preposition’s semantics is geometric. In Lakoff’s (1987) analysis of the English preposition ‘over,’ he not only considers the geometries of the Figure and Ground, the schema they create together, but also whether that schema is static or involves motion. In order to describe the non-spatial senses, he then analyzes in great detail which elements of the spatial schemas have been metaphorically mapped onto non-

spatial concepts. The extensive detail to which he distinguishes non-spatial senses has been challenged by Tyler and Evans (2001). They argue that many of the distinctions made are unnecessary and can be described with more broad definitions for sense; however, their study does agree with Lakoff's categorization of the spatial senses. Therefore, it is important to take into consideration any amount of motion, as well as geometry that a spatial gram may code.

Vandeloise (1994) analyzes the different types of methodology used in describing the English preposition 'in' and its French equivalent *dans*. He describes methodologies that take geometry, topology, and function into account. In doing so, he says that looking solely at the geometric or topological orientation is insufficient to describe the semantics of *dans*. Because of this, he is a strong proponent of taking the functional relationship of the Figure and Ground into consideration. Garrod et al. (1999), in an experimental study, draw a similar conclusion in their analysis of 'in' and 'on' in English in which they state that these prepositions need to be described by their functional geometries as well as their spatial geometries.

In sum, the spatial geometries, such as shape, magnitude, and continuity, and functional geometries, such as control, as well as the motion or direction in a scene need to be taken into account when examining the semantic scope of spatial grams. The following section describes the semantic behavior of Garifuna spatial prepositions and suffixes with respect to their functional and spatial geometries as well as the different features of the Figures and Grounds in the examples given.

3.1 Prepositions

Before delving into the specifics of each morpheme, the semantic features that apply to all the prepositions will be discussed. As mentioned above, Talmy (1983) analyzes the semantics of spatial notions in terms of the geometries and qualities of the Figures and Grounds. In English, these qualities do not always trigger the differences between prepositions, but it is important to examine what kinds of Figures and Grounds can be used with each preposition. As in English, all the Garifuna prepositions investigated here can have either discrete or continuous Figures and Grounds. To illustrate this, note the following examples with *-ida*:

Discrete - Discrete

- (22) *l-arama* *l-ida* *bürürü*
P3ms-stand P3ms-IDA yard
'He's standing in the yard'

Discrete - Continuous

- (23) *aramayun-ia* *l-ida* *duna*
stand-prog P3ms-IDA water
'I'm standing in the water'

Continuous - Discrete

- (24) *i-ni-he* *egini* *l-ida* *soduweru*
exist-I3ms-exist food P3ms-IDA pot
'The food is in the pot'

Continuous – Continuous

- (25) *i-ni-he* *miligi* *l-ida* *bachati*
exist-I3ms-exist milk P3ms-IDA tea
'There is milk in the tea'

Rather than the properties of the Figure and Ground individually determining the use of a preposition, it is the relationship between the Figure and Ground, as in English and many other languages.

The sections that follow will discuss the individual prepositions *-ida*, *-uwagu*, *-ubadu*, *-wéi*, and *-un* and the suffixes *-rugu*, *-un*, and *-gien*.

3.1.1 *-ida*

The preposition *-ida* relates two nouns, a Figure and Ground, within the container schema as defined by Lakoff (1987). According to Lakoff, the structural elements of this schema are an interior, an exterior, and a boundary. Lakoff claims that all humans have access to this schema because of the way our bodies interact with the world. Our bodies can function as containers, and this knowledge is mapped onto other containers or container-like things in the world. According to Lakoff the basic logic of the container schema is:

Like most image schemas, its internal structure is arranged so as to yield a basic 'logic.' Everything is either inside a container or out of it—P or not P. If a container A is in container B and X is in A, then X is in B... (p.272)

In an experimental study, Garrod et al. (1999), discuss the semantics of English 'in' and 'on.' They argue that 'in' does not only denote a spatial configuration based on a container schema, but also, if not more importantly, codes the functional geometry of control. This means that if a Figure is 'in' or contained by a Ground, the fact that the container controls the position of the Figure is also a salient factor in the use of the preposition. For example, if an apple is on top of a pile of fruit that is contained by a bowl, the apple may not be spatially surrounded by the bowl, but because the bowl still

controls the location of the apple, English speakers describe the location of the apple as being ‘in’ the bowl. Lakoff’s container schema does not involve control, but due to the results of the experiment by Garrod et al. (1999), suggest that the semantics of containment should not only be made up of the structural elements of an interior, exterior, and a boundary, but also the functional element of control. From this point forward the word *containment* will be used to refer to a spatial scene showing both geometric *surrounding* and functional *control*.

As in the study of ‘in’ from Garrod et al. (1999) and Vandeloise (1994), it seems that the relevant factors for the use of *-ida* are the *surrounding* of Figure by a Ground and the *control* of the Figure’s spatial position by the Ground; however, there can be a focus on one or the other. By *control*, this thesis follows Garrod et al. (1999) to mean that if the Ground were moved, the Figure’s location would also change. By *surrounding* it is meant that the Ground makes a physical boundary around the Figure. Example (26) illustrates the use of *-ida* to indicate the location of the chips as surrounded and controlled by the bag. Example (27) similarly illustrates the use of *-ida* to specify the location of a hose as being surrounded and controlled by the house.

Control and Surrounding

(26)	<i>i-nu-houn</i>
exist-3fs-exist
‘The chips are in the bag’	<i>tahara</i>
chip(s)	<i>t-ida</i>
P3fs-IDA	<i>sagu</i>
bag
(27)	<i>i-ni-he</i>
exist-I3ms-exist
‘It is in the house’ (answer to the question: where is the hose?)	<i>t-ida</i>
P3fs-IDA	<i>muna</i>
house	

This preposition can also code surrounding, without necessarily control, as in examples (28) and (29) where the elements that function as Grounds, ‘water’ in (28) and ‘forest’ in

(29), are conceived as simply surrounding the Figure ‘I,’ but not exercising any control over them. Theoretically, the removal of ‘water’ in (28) will not affect the position of ‘I’:

Surrounding

(28) *ebun-ia* *l-ida* *duna*
 walk-prog P3ms-IDA water
 ‘I’m walking in the water.’

(29) *n-ebagu-ia* *l-ida* *dabiara*
 P1s-run-prog P3ms-IDA forest
 ‘I’m running in the forest.’

But when the Figure is not necessarily surrounded, but definitely controlled by the Ground, as in the case of an open container with no raised side as to form a cavity, such as a ‘plate’ or ‘chair,’ it is often the case that there will be an alternation with *-uwagu*, which designates support (discussed in more detail in Section 3.1.2). For example, the following sentences can use either *-ida* or *-uwagu*.

Control

(30) *i-ni-he* *b-eigi* *l-ida* *aseidu*
 exist-I3ms-exist P2s-food P3ms-IDA plate
 ‘Your food is in your plate’

(31) *i-ni-he* *b-eigi* *l-uwagu* *aseidu*
 exist-I3ms-exist P2s-food P3ms-UWAGU plate
 ‘Your food is on your plate’

(32) *yuru-n-ia* *l-ida* *haloü*
 sit-1s-prog P3ms-IDA chair
 ‘I am sitting in the chair’

(33) *yuru-n-ia* *l-uwagu* *haloü*
 sit-1s-prog P3ms-UWAGU chair
 ‘I am sitting on the chair’

This is probably due to different ways this scene can be construed. One could see the control of the Figure coming from the surrounding or from the contiguity of the Ground. Because of this flexibility, speakers can code these scenes with either *-ida* or *-uwagu*.

Choosing *-ida* over *-uwagu* to code a spatial scene can be used to impose *surrounding* or *control* on that scene. For example, Speaker 1 said that if her child were squirming around in her chair, she would say:

- (34) *yu-ru-ba* *l-ida* *haloü*
 sit-D3fs-imp P3ms-IDA chair
 ‘Sit in the chair’

Here she is imposing the container schema on this relationship in order to emphasize that the chair should not only support her, but it should contain her, confining her activities, and thus her daughter should sit still.

By looking at the English translations, we can see that this is similar to the alternation between ‘in’ and ‘on’ in this spatial scene. However, this alternation between *-ida* and *-uwagu* can occur in scenarios where ‘in’ and ‘on’ would not necessarily alternate in English. For example, compare (30) and (31) above. English speakers would not necessarily describe this scene with ‘in’ because the shape of a stereotypical plate is more flat than container-like. Because *-ida* can be used when the Ground is a flat dish/plate it is apparent that control is more relevant in the relationship coded by *-ida* than in the relationship coded by English ‘in.’

To illustrate that this alternation with *-uwagu* only occurs when surrounding is not obvious, notice the following example describing food in a large pot:

- (35) *i-ni-he* *egini* *l-ida* (**uwagu*) *sóduweru*
 exist-I3ms-exist food P3ms-IDA pot
 ‘The food is in the pot.’

Here *-uwagu* cannot be used because the control and surrounding is very clear, in the same way that English speakers would use ‘in’ rather than ‘on.’

The data from the TRPS also show that *-ida* codes surrounding and control. Pictures 2, 32, 54, and 67 were described by both speakers using this preposition and Pictures 13,¹⁴ 14, 19, 28, 47, and 71 were described by only one speaker using this preposition (see Appendix D for the descriptions of each of these pictures). These pictures support the description of *-ida* as coding containment of a Figure by a Ground. Pictures 2, 32, and 54 show the total *surrounding* and *control* of the Figure by the Ground in three dimensions. Example (36) describing Picture 54 illustrates this clearly with a ‘rabbit’ in a ‘cage’ that controls its whereabouts. For example:

Picture 54

- (36) *I-ni-ha* *másaraga* *l-ida* *l-agei*
 exist-I3ms-exist rabbit P3ms-IDA P3ms-case
 ‘The rabbit is in its case
le arederubane lu-wéi leibagu
 that stops it from getting away.’

This total *control* and *surrounding* in three dimensions can also be created by a Ground that has an opening, as in:

Picture 2

- (37) *I-ni-ha* *furuda l-ida* *l-agei*
 exist-I3ms-exist fruit P3ms-IDA P3ms-container
 ‘The fruit is in its container.’

¹⁴ It is difficult to see a containment relationship in this picture, however the speaker described the location of the lamp cord with as being ‘in’ the ceiling. The other pictures are more self-explanatory.

Picture 67 also shows *surrounding* and *control* of a Figure by a Ground, but the surrounding is not complete because the Figure protrudes partially from the Ground. For example, in (38) below, a box is surrounded by a purse, but part of the box is coming out of the purse.

Picture 14

- (38) *i-nu-houn* *gafu* *t-ida* *tu-posu*
 exist-P3fs-exist box P3fs-IDA P3fs-purse
 'There is a box in her purse.'

The last type of surrounding and control coded by *-ida* in the TRPS is that of Picture 28. Here there is two-dimensional surrounding of a Figure 'woman' by a 'frame,' in this case a stamp.

Picture 28

- (39) *i-nu-ha* *tiawa hinyaru* *l-ida*
 exist-I3fs-exist picture woman P3ms-IDA
 'There is a picture of a woman in
 tuwende dugule tadahiru
 a frame (dressing for hanging pictures).'

The speaker was not asked if the Ground was controlling the location of the Figure; however, by examining the pictures themselves, it is clear that any movement by the Ground would also affect the Figure. In addition, in the TRPS data, all uses of *-ida*, monomorphemically, were for pictures that involve *surrounding*. However, the preposition *-ida* was also found in the description of Picture 30 in combination with the suffix *-gien*. This will be discussed in section 3.2.3.

In the data gathered from the TRPS, topological use of *-ida* are restricted to the relation of surrounding. The data gathered through the general elicitation session support this description, but also show that *-ida* can be used for spatial scenes with *surrounding*,

control, and *surrounding* and *control*. To conclude this section, the following label of the semantics of *-ida* is proposed:

Table 4: <i>-ida</i>		
Uses of <i>-ida</i>	Gloss of semantic notions coded	Abbreviation
Spatial	<i>Surrounding</i>	IN _G ¹⁵
	<i>Control</i>	
	<i>Surrounding and Control</i>	

3.1.2 *-uwagu*

3.1.2.1 Spatial uses of *-uwagu*

As mentioned above, *-uwagu* can also describe discrete or continuous Figures and Grounds and is used to show support of a Figure by a Ground by means of contiguity and control. By *contiguity* it is meant that the Figure and Ground are touching, and by *control* this thesis follows Garrod et al. (1999) to mean that if the Ground is moved, the Figure would also. *Control* has to do with functional geometry while *contiguity* has to do with spatial geometry. In (40) the pencil was placed next to the container, touching on one side. In (41) the hand is touching the strings of a guitar. These examples show the use of *-uwagu* in relations of contiguity.

Contiguity

- (40) *i-ni-he* *pensili l-uwagu* *l-oba* *dabáras*
 exist-I3ms-exist pencil P3ms-UWAGU P3ms-side container
 ‘The pencil is on the side of the container.’
- (41) *I-ni-he* *l-uhubu* *l-uwagu* *tu-guruduna* *gidara*
 exist-I3ms-exist P3ms-hand P3ms-UWAGU P3fs-string guitar
 ‘His hand is on the strings of the guitar.’ (Lit: there is his hand on the strings of the guitar)

¹⁵ A subscript ‘G’ next to all abbreviations for the Garifuna morphemes is used to differentiate these abbreviations from a more generalized notion of what these abbreviations may stand for.

In (42), the informant is describing a hat that rested on her head, which involves the relations of control and contiguity since any change of the location of the head would entail a change in location of the hat.

Control and Contiguity

- (42) *I-ni-he* *aba* *bunidi* *l-uwagu* *n-abulugu*
 exist-I3ms-exist one hat P3ms-UWAGU P1s-head
 ‘There's a hat on my head’

The preposition *-uwagu* can code contiguity between a Figure and Ground without necessarily control, but not control without contiguity. That is to say, the Figure and Ground can be touching, as in (40-41) without the Ground controlling the Figure. This is probably the case due to physical consequences of support, namely to control the spatial position of the Figure, the Ground must be touching the Figure. In this sense control presupposes contiguity.

The data from the TRPS also support the description of *-uwagu* as coding support by control or contiguity. All of the pictures coded by *-uwagu* involve some sort of contact or control of the Figure by the Ground. However, these can be separated into four groups of scenes that code support. The first of these will be called prototypical support, where a Figure is located on top of a Ground and is held in its position by the Ground. Here the support is maintained vertically. For example:

Picture 1

- (43) *I-ni-ha* *kopu* *l-uma* *asiedu l-uwagu*
 exist-I3ms-exist cup P3ms-with plate P3ms-UWAGU
 dábula
 table
 ‘The cup and saucer is on the table.’

Picture 5

- (44) *ga-bunidi-ti* *l-uwagu* *l-ichugu*
att-hat-T3ms P3ms-UWAGU P3ms-head
'He wears a hat on his head.'

The second group of spatial scenes coded by *-uwagu* is when the Figure and the Ground are both oriented vertically and they have contact on a side, or laterally. This will be called support by contiguity. For example:

Picture 25

- (45) *dahiyu-lia* *gagamuru* *l-uwagu* *t-oba*
hang-prog telephone P3ms-UWAGU P3fs-side
'The phone is hanging on the side (of the house = wall).'

Picture 58

- (46) *i-ni-ha* *kelera t-óba-wagu* *muna*
exist-I3ms-exist ladder P3fs-side-UWAGU house
'The ladder is on the side of the house.'

Another variation of this usage is with the suffix form of *-uwagu*, *-wagu*, which was mentioned previously and exemplified in example (46) describing Picture 58 above.

Again, this form has only been found suffixing to the nouns 'side' and 'head,' the latter in only one instance. All of the occurrences of the suffix in the TRPS data *-wagu* were with the noun 'side' and usually in the phrase '*t-óba-wagu muna*' literally meaning 'on the side of the house' or more colloquially 'on the wall.' It appears that this form has been somewhat lexicalized in this phrase. Other common words like 'head' and 'forehead' may also have undergone this lexicalization. Because the use of *-wagu* as a suffix is rather limited, the current data do not show it to be productive.

The suffix *-wagu* has also been found on the noun for 'face' forming a complex preposition. However, the suffix is in a different form. Due to its infrequent use, it is

unclear whether this is the reflexive¹⁶ form of *-uwagu* or an alternate of some kind.

Notice the following example from the TRPS:

Picture 23

- (47) *i-ni-he* *hozu* *l-igib-uwógu* *blagu*
 exist-I3ms-exist hose P3ms-face-UWAGU block
 ‘There’s a hose on top of the block (stump).’

There was only one instance of this construction in the data, and additional examples are clearly needed to see how the reflexive forms and suffixes alter the semantics of the spatial grams.

The third group of scenes coded by *-uwagu* is that showing partial containment.

Speaker 1 used *-uwagu* to code these pictures, while Speaker 2 used *-ida*. In the

¹⁶ Garifuna has the reflexive suffix *-guwa*, which affixes to prepositions and verbs. The morpheme *-guwa* may have a larger range of behavior, but providing a description of it is outside the scope of this study. To illustrate this suffix, notice its use with the preposition *-un* below:

- a) *hisie-guwa-tina* *n-un-guwa*
 like-ref-T1s P1s-un-ref
 ‘I like myself.’
- b) *hisie-guwa-tuwa* *won-guwa*
 like-ref-T1p P1p-un-ref
 ‘We like ourselves.’
- c) *hisie-guwa-ti* *l-un-guwa*
 like-ref-T3ms P3ms-un-ref
 ‘He likes himself.’

With the preposition *-uwagu*, the suffix *-guwa* also appears, however, there is a change in the vowel of the stem, and the last syllable of *-uwagu* merges with the first syllable of *-guwa* as in (d) below:

- d) *erenga-ba* *n-un* *b-uwógu-wa*
 tell-imp P1s-un P2s-uwagu-ref
 ‘Tell me about yourself.’

which contrasts with the non-reflexive:

- e) *erenga-ba* *n-un* *t-uwagu* *b-ugushu*
 tell-imp P1s-un P3fs-uwagu P2s-mother
 ‘Tell me about your mother.’

following example, the bed that the dog is sitting in has walls that surround the dog, but they do not come up very high. Due to the surrounding, there is some element of containment, but the dog is only partially contained and may or may not be controlled by the walls. Speaker 1 may have chosen to focus on the support of the bed rather than the surrounding or control of the dog by the walls.

Picture 47

(48) *yuruha* *ounli* *t-uwagu* *li-gabana*
 sit dog P3fs-UWAGU P3ms-bed
 ‘The dog is sitting on his bed.’

This spatial arrangement is very similar to the prototypical kind of support. However, there is some sort of containment involved; therefore, it is worth noticing that the line between *-ida* and *-uwagu* becomes less clear when the surrounding is only partial. Because Speaker 1 used *-uwagu*, while Speaker 2 used *-ida* for these scenes, the hypothesis is that, in scenes of partial surrounding, speakers can select the preposition based on the spatial factors in the scene that they want to emphasize, similar to the discussion of a child ‘in’ or ‘on’ a chair in section 3.1.1.

The preposition *-uwagu* was used to describe a fourth group of scenes that show support by attachment.¹⁷ This is not to say that *-uwagu* codes attachment, but that the relevant notions in scenes showing attachment are *control* and *contiguity*. Attachment does not play a role in the Garifuna spatial system. Picture 20, as described below in example (49), depicts a balloon attached to a stick near the top. In this case *-uwagu* is

Taylor (1956a) also notes the use of this suffix on what he calls ‘adverbial nouns’ or what Munro (1998) and this study have called prepositions. Cayetano (1993), on the other hand, gives the preposition *-uóguwa* as a preposition by itself meaning ‘on or about oneself.’

used to code this relationship, which shows that control and contiguity are the salient features.

Picture 20

(49)	<i>I-nu-ha</i>	<i>buloda</i>	<i>l-uwagu</i>	<i>l-ebu</i>	<i>wewe</i>
	exist-I3fs-exist	balloon	P3ms-UWAGU	P3ms-tip	stick
	'There is a balloon at the tip of the stick.'				

A specific type of support involving attachment, that is the wrapping of a Figure around a Ground is also coded by *-uwagu*. However, the preposition *-au* is also used, in the TRPS data to describe this kind of attachment. In fact, this is the only use of *-au* in the TRPS data. It seems that *-au* codes this specific relationship of 'around' while, *-uwagu* can also be used less specifically simply to code support, similar to the use of 'around' and 'on' in English. The preposition *-au* also functions as the instrumental, as shown in Munro (1998). A more complete description of the semantic range of *-au* is outside the scope of this study, but more work is needed.

Other scenes that also show support involving attachment, particularly when a Figure was hanging from a Ground, can be coded by either the complex preposition *-wéigien* or *-uwagu*. The particulars of the semantics of *-wéigien* will be discussed in section 3.1.4.1; however, the fact that *-uwagu* can also be used for these scenes implies that *-uwagu* may code a more general notion of support, while *-wéigien* codes a more specific spatial configuration.

The data from the TRPS have confirmed the use of *-uwagu* for notions of support. The data also clarify that because the relevant notions coded by *-uwagu* are

¹⁷ Note that by attachment, ATTACHMENT is not meant as a notional category as discussed in Levinson et

control and contiguity, *-uwagu* can code support in scenes that show prototypical support, support by contiguity, support involving partial containment, and support by attachment. This data set also shows the alternation of *-uwagu* with *-ida*, *-áu*, and *-wéigien*.

3.1.2.2 Non-spatial uses of *-uwagu*

The morpheme *-uwagu* additionally has various extensions of this notion of support. This section will outline and describe some of these non-spatial uses, but an in depth study of it is outside the scope of this thesis. Munro (1998) posits that *-uwagu* is the benefactive. Although this morpheme does code benefactive relations, Lakoff (1987) discusses how non-spatial meaning often occurs due to a spatial schema being mapped onto a different domain. For example, Lakoff and Johnson (1999) discuss how a negative experience can be metaphorically viewed as a physical burden to be carried. More specifically, Lindstromberg (1997) writes that “if you have something ‘on’ your mind, you are metaphorically burdened with a concern” (p. 61). We then find morphemes coding support, like ‘on’ in English, coding not only physical support, but also benefactive/malefactive relations. Heine et al. (1991) also discuss various examples of languages using words whose primary meanings are spatial metaphorically for qualities, time, and various other non-spatial relations.

Because Lakoff and Johnson (1999), Lindstromberg (1997), and Heine et al. (1991) show examples of languages extending morphemes that code spatial relations to those that code non-spatial relations, this study assumes that the primary sense of *-uwagu* is that of contiguity and control, which has been extended to cover

al. (2003). It is simply a reference to the fact that the Figure and Ground in the scenes are attached.

benefactive/malefactive relations as follows. Malefactive relations can be clearly seen as a burden and are coded with *-uwagu*. Munro (1998) finds that in verbs where one is affected by something, the experiencer is expressed through an oblique subject using *-uwagu*. The data also show this in the following examples where a ‘cold’ and a ‘head ache’ are coded as ‘on’ the people who are affected by them:

- (50) *a-ni-hen*¹⁸ *yedunu ha-wagu* *n-aguburigu*
 exist-I3ms-exist cold P2p-UWAGU P1s-parents
 ‘My parents have a cold’ (Lit: there is a cold on my parents)
- (51) *a-ni-hen* *l-igari* *ichugü ha-wagu* *n-aguburigu*
 exist-I3ms-exist P3ms-ache head P2p-UWAGU P1s-parents
 ‘My parents have a head ache’
 (Lit: there is an ache of the head on my parents)

But the malefactive is also shown by *-uwagu* in other uses that are not specifically for physical illnesses. The following two examples show a negative event being portrayed as ‘on’ someone. Note that (53) is not a euphemism for vomiting.

- (52) *giringwa-yon n-uguni* *n-uwagu*
 break-prog P1s-vehicle P1s-UWAGU
 ‘My car (vehicle) broke down on me’
 (use of progressive implies that it has happened before)’
- (53) *sandiha-dibu nu-wagu*
 be sick-D2s P1s-UWAGU
 ‘You got sick on me’
- (54) *hila-t-ian* *wa-wagu*
 dead-T3ms-prog P1p-UWAGU
 ‘He died on us.’
 (As in: We were on the way to the hospital, but he died on us)

¹⁸ The root *a-he* varies with *i-he* for ‘exist,’ but the details of this variation is outside the scope of this thesis.

Benefactive relations are those in which an argument in the sentence benefits somehow from the action involved. The benefactive is coded by *-uwagu* in cases where the benefit of someone is being highlighted. In general, benefactive in cases where there is transfer of an object, the preposition *-un* is used. To see this contrast, notice the following two sentences:

- (55) *aduga-tina egin ho-un n-aguburigu*
 make-T1s food P2p-UN P1s-parents
 ‘I made dinner for my parents’
- (56) *abawa-dibu n-uwagu*
 cook-D2s P1s-UWAGU
 ‘You have cooked for me (when you weren't supposed to)’

In (55), *-un* is used to show a general recipient of the dinner, while in (56), *-uwagu* is used to stress the benefit to the recipient of the action. Other benefactive relations of this nature are exemplified below:

- (57) *hila-ti suntigabafu bungiu wa-wagu*
 dead-T3ms almighty God/Christ P3p-UWAGU
 ‘Christ died for us’
- (58) *furegi-tina ha-wagu n-aguburigu*
 pray-T1s P2p-UWAGU P1s-parents
 ‘I pray for my parents’

Note the use of ‘die’ in both (54) and (57), where the former is a malefactive notion and the latter is a benefactive notion. Because *-uwagu* can code both benefactive and malefactive relations, the difference must be interpreted depending on the context.

The preposition *-uwagu* is also extended to signify ‘about’ or ‘concerning.’ This is also similar to the way English extends ‘on.’ According to Lindstromberg (1997), the

central meaning of the spatial ‘on’ is made up of an image of a Ground that is relatively broad in comparison with the Figure. For example, if something is ‘on’ a table, the table is typically broader than anything on the table. Similarly, if an article is written ‘on’ a topic, the topic is broader than the one article on it. See the following examples for the similar use of *-uwagu*. Note that (59) cannot mean ‘I have read for you’:

- (59) *aliha-dina b-uwagu*
 read-D1s P2s-UWAGU
 ‘I have read about you’
- (60) *hisie-tu garada n-un l-uwagu aboguni*
 please-T3fs book P1s-UNP3ms-UWAGU cooking
 ‘I like books about cooking’
- (61) *naluwaha-ia aba garada l-uwagu balisi*
 search-prog one book P3ms-UWAGU Belize
 ‘I’m looking for a book on Belize’

As shown above, the use of *-uwagu* is very similar to the use of English ‘on.’ The extension of spatial uses is similar to the extension of English ‘on’ from coding spatial scenes with contiguity and control to non-spatial malefactive relations as well as ‘about/concerning.’ The difference between the English and Garifuna extension is that English has not extended ‘on’ to benefactive, while Garifuna has. In sum, this study posits that the preposition *-uwagu* has a physical spatial use of contiguity and control that may be extended to create the use of benefactive/malefactive and ‘about/concerning.’

Table 5: <i>-uwagu</i>		
Uses of <i>-uwagu</i>	Gloss of semantic notions coded	Abbreviation
Spatial	<i>Contiguity</i>	ON _G
	<i>Control and contiguity</i>	
Non Spatial	Benefactive	BEN _G
Non Spatial	Malefactive	MAL _G
Non Spatial	About, concerning	ABOUT _G

3.1.3 –*ubadu*

The preposition –*ubadu* is used to relate a Figure and Ground based on physical proximity. This preposition alternates with a complex preposition –*óbagien*. The word *oba* means ‘side’ and as we will see with the discussion of the suffix –*gien* below, the combination of the two is similar to the English preposition ‘beside’ in both derivation and semantic use. The use of –*óbagien* places the Figure very close to the Ground, at its ‘side.’ The preposition –*ubadu* can be used to describe the same spatial scene as –*óbagien*, as seen below:

(62) *I-ni-hen* *t-óba-gien* *idibu*
 exist-I3ms-exist P3fs-side-GIENTree
 ‘He is beside the tree’

(63) *I-ni-hen* *t-ubadu* *idibu*
 exist-I3ms-exist P3fs-UBADU tree
 ‘He is near the tree’

However, –*ubadu* can be used when the distance between the Figure and Ground is greater than that which the use of –*óbagien* requires, but as Speaker 1 has described, the Figure is ‘within reach.’

It should be noted that the notion of ‘beside’ is that of a Figure located ‘at the side,’ that is to say, laterally adjacent to and almost, if not touching, a Ground. In contrast, the notion of ‘near’ does not code a lateral dimension and the Figure and Ground are not usually contiguous. As with English ‘near’ it is difficult to pinpoint the exact proximity that –*ubadu* codes. For example, there is a difference in the literal proximity of the cow to the fence in (64), than the pitcher is to the glass in (65) below:

- (64) *I-ni-hen* *bágasu l-ubadu* *barieru*
 exist-I3ms-exist cow P3ms-UBADU fence
 ‘The cow is near the fence.’

- (65) *I-ni-he* *l-ubádu* *fudu*
 exists-I3ms-exist P3ms-UBADU glass
 ‘It [the pitcher] is next to the glass.’

Therefore, it is not necessarily a specific distance coded by *-ubadu* but it refers rather to the sphere of influence of the two objects relative to their size and function. Svorou (1994) refers to this sphere of influence as a *region*. She defines *regions* as “conceptual structures which are determined by our knowledge about physical, perceptual, interactional, and functional attributes of entities” (p. 15). Using this terminology, it can be claimed that *-ubadu* codes the location of a Figure within the same *region* as a Ground. The idea is similar to Vandeloise’s (1991) analysis of the French preposition *pres de* ‘close to.’ He argues that it is not the distance that is coded by this preposition, but the level of accessibility.

None of the pictures from the TRPS have been described using *-ubadu*. Only two pictures, that is, Pictures 6 and 38, depicted a Figure whose primary relationship to the Ground was proximity. For Picture 6, Speaker 1 used other methods to describe this relationship, while Speaker 2 used *-óbagien*. Picture 6, from Speaker 1, showed use of *bogudi*, which Cayetano (1993) labels an adverb, as in:

Picture 6

- (66) *yu-l-ia* *oungli bogudi* *t-un* *l-uba*
 sit-D3ms-prog dog outside P3fs-UN P3ms-house
 ‘The dog is sitting outside his house.’

It is clear that *bogudi* codes a spatial relation of ‘outside’ but it does not behave like a preposition (i.e. there is no pronominal marking) or a suffix, so it is unclear what syntactic status it has; however it does function adverbially. The other spatial gram *–un* functions more as a grammatical marker here rather than marking direction towards the Ground ‘house.’ This will be discussed further in section 4.1.2.

The other picture showing a relation of proximity, Picture 38 was described by both Speaker 1 and Speaker 2 using the word *oba* ‘side’ and the suffix form of *–uwagu*.

For example:

Picture 38 – Speaker 1

(67) *yu-l-ian iyeri le mua-rugu l-óba-wagu watu*
 sit-D3ms-prog pro.ms this.ms ground-RUGU P3ms-side-UWAGU fire
 ‘This guy is sitting on the ground next to the fire.’

Picture 38 – Speaker 2

(68) *i-ni-he aba gurigea yul-ia l-óba-wagu watu*
 exist-I3ms-exist one person sit-prog P3ms-side-UWAGU fire
 ‘There is a man sitting beside the fire.’

This data shows the different degrees of specificity Garifuna speakers can choose to code proximity, other than the preposition *–ubadu*.

Even though the TRPS did not provide examples of *–ubadu*, it cannot be claimed that *–ubadu* cannot be used to code topological notions; it rather emphasizes how similar scenes can be viewed and construed in different ways. To further study the alternation of *–ubadu* with these morphemes, as well as *–óbagien*, more pictures depicting proximity, without any other topological relationship, should be used for elicitation. Despite this, the data gathered through the general elicitation procedure still point to the use of *–ubadu* to code proximity within a certain sphere of influence.

Table 6: <i>-ubadu</i>		
Uses of <i>-ubadu</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Proximity within a sphere of influence/ <i>region</i>	NEAR _G

3.1.4 *-wéi*

3.1.4.1 Spatial uses of *-wéi*

Munro (1998) labels the preposition *-wéi* as ablative. The data support this categorization. By ablative this study follows the spatial definition “(away) from” and a “marker introducing a spatial participant; direction from” (p. 16) according to Heine and Kuteva (2002). The use of *-wéi* codes the Ground as some origin or point of reference relative to which the Figure is located. This ablative relationship between the Figure and Ground can involve motion as in the following examples describing a pen falling or dropping from a hand:

- (69) *aba l-áburuha aburuha-gule tu-wéi*
 then P3ms-fall/drop write-nom P3fs-WÉI
 ‘The pen fell from her’
- (70) *áburuha peni nu-wéi*
 fall/drop pen P1s-WÉI
 ‘I dropped the pen’ (Lit: There was a pen dropping from me.)

It can also involve the movement of a person away from a location:

- (71) *ebugei-na ligía tu-wéi n-uba*
 walk-S1s pro.ms P3fs-WÉI P1s-house
 ‘He walked away from my house.’

The preposition *-wéi* can also be used in stative ablative relationships as in:

- (72) *dise-tu büdügü tu-wéi n-uba*
 far-T3fs store P3fs-WÉI P1s-house
 ‘The store is far from my house.’

These examples show *–wéi* coding directionality away from a Ground. The use of *–wéi* often involves motion. However, because *–wéi* can be used to describe stative relationships, it is the verb in a phrase that brings motion into the scene. The morpheme *–wéi* does not necessarily code motion but marks the Ground as the origin of reference for the Figure.

The preposition *–wéi* is often used with the suffix *–gien*. The suffix *–gien* will be discussed further in section 3.2.3; however, because they carry similar semantics, the understanding of both of these morphemes will be enhanced by the discussion of their combination. The examples above show how *–wéi* is used to code the Ground as an origin relative to which the Figure is oriented. This is also clear from example (73) below:

- (73) *áburaha* *fáluma* *tu-wéi* *ilena*
 fall coconut P3fs-WÉI Elaine
 ‘The coconut fell from Elaine’

Notice in example (74) that when *–gien* is used as a suffix on *–wéi*, the origin of the coconut is coded by *–wéi*, but *–gien* adds direction away and separation from that origin.

- (74) *babou* *áburuha* *fáluma* *tu-wéi-gien* *idibu*
 oh fall coconut P3fs-WÉI-GIEN tree
t-adagara *n-óba-gien*
 P3fs-land P1s-side-GIEN
 ‘Oh! A coconut fell off of the tree and landed not far from me (my side).’

However, it is not necessary that the Figure and Ground be attached to have separation.

In (75) below, the pen is supported by the table, the origin, from which it is then separated.

- (75) *aba l-áburuha aburuha-gule lu-wéi-gien dábula*
 then P3ms-fell write-nom P3ms-WÉI-GIEN table
 ‘The pen(writing utensil) fell off of the table.’

The element of separation added by *-gien* is also apparent from the following two examples:

- (76) *baru-ba-i asiedu le nu-wéi*
 take-imp-S/R3ms dish this.m P1s-WÉI
 ‘Take this dish away from me.’
- (77) *raga-ba-u düguóu tó nu-wéi-gien düdü-tu*
 take off-imp-S/R3fs clothes this.f P1s-WÉI-GIEN wet-T3fs
 ‘Take these clothes off me, they are wet.’

Example (76) above only codes ‘me’ as the origin from which the Figure was taken; however, in (77) the Figure is not just removed from an origin, but separated from that origin. Section 3.2.3 will discuss the semantics of *-gien* in more detail; however, by examining this combination, it is clear that *-wéi* codes the origin of some direction away, and when *-gien* affixed to *-wéi*, there is further direction away, thus separation from that origin.

No pictures in the TRPS were described primarily by *-wéi*; however, the descriptions of Pictures 27, 57, and 63 exemplify the stative use of *-wéigien* that depicted a Figure hanging from a Ground:

Picture 27

- (78) *dibiyul-ia furuda tu-wéi-gian idibu*
 hang-prog fruit P3fs-WÉI-GIEN tree
 ‘The fruit is hanging from the tree.’

Picture 57 – Speaker 2

- (79) *i-ni-he aba katei adibina-ti lu-wéi-gien iyari*
 exist-I3ms-exist one something ADIBINA-T3ms P3ms-WÉI-GIEN chain
 ‘There is something hanging from the chain.’

Picture 63

- (80) *dibiyu-l-ia* *lampu lu-wéi-gian* *t-isielu* *muna*
hang-D3ms-prog lamp P3ms-WÉI-GIEN P3fs-ceiling house
‘The lamp is hanging from the ceiling.’

The Figure and Ground are connected by a stem (78) or a chord (80), but there is a gap between the Figure and Ground due to the stem or chord. In this sense, *-wéi* codes the Grounds ‘tree’ and ‘ceiling’ as the origin and *-gien* codes their separation, but not necessarily total detachment.

3.1.4.2 Non spatial uses of *-wéi*

This spatial use of *-wéi* has also been extended to non-spatial uses. In the example below the point of origin that is coded by *-wéi* is a temporal action rather than a physical point:

- (81) *ma-luha-ru* *lu-wéi* *t-achulura*
priv-far-D3fs P3ms-WÉI P3fs-arrive
‘She is not far from arriving.’

Non-spatial uses of *-wéi* are not the focus of this study, but based on the definition of the temporal ablative from Heine and Kuteva (2002) as a “marker introducing a temporal (source) participant” (p. 16) this thesis posits a temporal ablative notion coded by *-wéi*.

Table 7: <i>-wéi</i>		
Uses of <i>-wéi</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Ablative notion of source in space.	SOURCE _G
Non Spatial	Ablative notion of source in time.	SOURCE _G

3.1.5 *-un*

3.1.5.1 Spatial uses of *-un*

Munro (1998) labels the preposition *-un* as the dative noting that it also covers the range of the normal benefactive. The data also affirm this, as mentioned in the discussion

of *-uwagu*. But because *-un* also functions as a directional suffix, which will be discussed in section 3.2.2, it is possible that the dative use is extended from a spatial/directional scene. This is similar to the use of English ‘to.’ ‘To’ has a directional use as in ‘I’m going *to/towards* school,’ but the same spatial gram has been extended to the dative marker as in ‘I gave the blouse *to* my mother.’ Heine and Kuteva (2002) also show examples of the allative becoming the dative through grammaticalization.

The directional sense of *-un* occurs in its prepositional and suffix use. Section 3.2.3 will focus on the suffix use. The morpheme *-un* is used to show direction or reference towards a Ground. For example (82) shows an active scene where *-un* marks the direction towards the Ground ‘work’:

- (82) *i-ni-gira* *l-un* *l-uwadigimari*
 leave-I3ms-leave P3ms-UN P3ms-work
 ‘He went to his work’

In the stative example (83) below, *-un* shows a direction towards the Ground ‘store’ without any implicit motion.

- (83) *yaraŋa-ti* *n-aganóun* *t-un* *büdügü*
 near-T3ms P1s-dwelling P3fs-UN store
 ‘I live near the store’ (Lit: My house is near to the store)

This directional use of *-un* functions as a counterpart to that of *-wéi*, the former orienting the Figure towards the Ground, and the latter orienting the Figure away from the Ground.

Again, because the element of motion is often involved in scenes that use *-un* and the focus of the TRPS on topological notions, no examples of this were found describing pictures.

3.1.5.2 Non-spatial uses of *-un*

The dative use of *-un* occurs in the traditional dative sense, where there is transfer of an object to a location. For example:

- (84) *u n-umu-tu chegidi t-un n-ugushu*
 give P1s-AUX-T3fs blouse P3fs-UN P1s-mother
 ‘I gave the blouse to my mother’

See section 3.1.2.2 above for the discussion of the alternation of *-un* with *-uwagu*.

Another non-spatial use of *-un* is to designate purpose. This purpose can be the designated use of some nominal, coding the purpose as its head as in:

- (84) *gusiyu tó l-un t-ibia-yon fein*
 knife this.fs P3ms-UN P3fs-cut-nom bread
 ‘This knife is for cutting bread.’

The purpose can be the reason for an action, again coding the purpose as its head as in

(86) below:

- (86) *n-adurugububa-dibu ligilisi-rugu l-un wa-feindiha*
 P1s-meet-D2s church-RUGU P3ms-UN P1p-paint
 ‘I’ll meet you at church to paint.’

In sum, the spatial sense of *-un* codes motion of a Figure towards a Ground or the direction or orientation of a Figure towards a Ground, similar to English, ‘to,’ while the non-spatial uses code dative relations and purpose.

Table 8: <i>-un</i>		
Uses of <i>-un</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Direction of a Figure <i>towards</i> a Ground	ALL _G
Non Spatial	Dative	DAT _G
Non Spatial	Purpose	PURP _G

3.2 Suffixes

The spatial suffixes that will be examined below are *-rugu*, *-un*, and *-gien*. Each of these code different spatial relations, and they are highly grammaticalized because of their syntactic function. As shown in section 2.2, these suffixes do not take pronominal marking and are bound morphemes. In addition to describing the semantic scope of these suffixes, the discussion below will also show that the suffixes code less specific spatial relations than the prepositions discussed above.

3.2.1 *-rugu*

The data support Taylor's (1956a) categorization of the suffix *-rugu* as a locative marker that codes containment. This morpheme alternates with the preposition *-ida* IN_G and seems to encompass its semantic scope. There are a few instances where *-rugu* occurs in similar scenes as *-uwagu* ON_G, but these are less common. Because there is this occasional alternation, the specifics of the location, e.g. the schemas conveyed by *-rugu* seem to come from the speaker's knowledge about how the Figure and Ground interact with each other rather than specific spatial semantics coded by *-rugu*. For example, the sentences below show the same basic spatial configuration:

- (87) *i-ni-he* *liglisi-rugu*
exist-I3ms-exist church-RUGU
'He is at church.'
- (88) *i-ni-he* *t-ida* *liglisi*
exist-I3ms-exist P3fs-IDA church
'He is in/at church.'

In this case, when *-rugu* is used, containment within the sphere of influence of the church is expressed probably due to the knowledge of how people usually interact with churches,

that is, they go inside them and have activities. People can be outside of them, but without any other context, if one is to be located with respect to a church or school, it is most likely inside; however *-rugu* allows for either inference given a context. For instance, the examples above can also be used if the subject is located at the buildings in question for activities other than the usual ones, such as fixing the lights, painting the walls, etc. Notice the previous example (87) as well as the following:

- (89) *n-adurugububa-dibu ligilisi-rugu l-un wa-raserunei igemuri*
 P1s-meet-D2s church-RUGU P3ms-UN P1p-fixlight
 'I'll meet you at church to fix the lights.'

Speaker 1 said that painting the church in example (86) does not specify whether the painting is to take place inside or outside. Fixing the lights in example (89) also does not specify whether the lights are inside the building or outside. Despite the fact that these examples do not *necessarily* show containment by a Ground, the use of *-rugu* codes that the action is to take place within the sphere of influence/*region* of the buildings, which can be outside.

The suffix *-rugu* can also function semantically similar to *-ida* when it is combined with the suffix *-gien*. For example:

- (90) *n-ebugu-ya dabiyaara-rugu-gian*
 P1s-walk-prog forest-RUGU-GIEN
 'I'm walking through the forest'
- (91) *n-ebugu-ya l-ida-gian dabiyaara*
 P1s-walk-prog P1ms-IDA-GIEN forest
 I'm walking through the forest

Here the containment notion coded by *-rugu* is combined with the direction away coded by *-gien*, to mean through. This will be discussed further in section 3.2.3.

The suffix *-rugu* can also be used in a few parallel circumstances with *-uwagu* ON_G. The following examples both describe a picture frame in a vertical position supported by a shelf in response to the question ‘Where is the picture frame?’:

(92) *yura-rugu*
shelf-RUGU
‘on the shelf’

(93) *i-nu-hou* *tuwendena tadahirun iyawoü* *l-uwagu*
exist-I3fs-exist ‘the dressing for hanging pictures’ P3ms-UWAGU
l-aru *yura*
P3ms-edge shelf
‘the picture frame is on the edge of the shelf’

Because *-rugu* is used in a scene where there is clearly no containment, the semantics coded by *-rugu* are still in question.

Only two pictures from the TRPS were primarily described using the suffix *-rugu*. These two uses of *-rugu* do show a relation of partial containment, yet control by the Ground. Picture 11 shows partial containment of a boat by water. This can be viewed as *partial containment* because whenever a boat is on water, part of it must be submerged/contained by the water. It does not rest on top of the water in the same way that a cup can sit on a table.

Picture 11

(94) *I-nu-ha* *guiera duna-rugu*
exist-I3fs-exist boat water-RUGU
‘There is a boat on the water.’

Speaker 2 also said this scene could be coded by *-rugu*, but also *-ida*, and *-uwagu*, though she favored using the non-spatial gram construction *baranaha*.

Picture 11 – Speaker 2

- (95) *i-nu-he* *guyiera* *barana-ha*
 exist-I3fs-exist boat sea-HA
 ‘The boat is at sea.’
- (96) *i-nu-he* *aba* *guyiera* *l-ida* *barana*
 exist-I3fs-exist one boat P3ms-IDA sea
 ‘The boat is in the sea.’
- (97) *i-nu-he* *aba* *guyiera* *l-uwagu* *barana*
 exist-I3fs-exist one boat P3ms-UWAGU sea
 ‘The boat is on the sea.’
- (98) *i-nu-he* *aba* *guyiera* *barana-rugu*
 exist-I3fs-exist one boat sea-RUGU
 ‘The boat is in the sea.’

This variation affirms the alternation of *–ida* and *–uwagu* in scenes of partial containment, as well as shows *–rugu*’s ability to code these scenes. Despite this variation, as discussed in section 3.1.1, the selection of any spatial gram will provide a different construal of the scene based on the relevant notions involved in the particular spatial gram.

Though Picture 11 shows partial containment, it remains different from example (87) above where *–rugu* is used to code the location of a Figure ‘at church.’ The fact that *–rugu* codes both of these types of containment leads to the hypothesis that *–rugu* codes containment within a sphere of influence of a Ground, rather than containment within the physical boundaries of the Ground.

Picture 39 also shows partial containment of a cigarette in a man’s mouth. Part of the cigarette is surrounded by the mouth, while the majority of it is hanging out.

Picture 39

- (99) *I-ni-ha* *sigaru* *liumu-lugu*¹⁹ *l-agumuluhe-in*
 exist-I3ms-exist cigarette mouth-RUGU P3ms-smoke-IN
 ‘There is a cigarette in his mouth and he is smoking.’

A third instance of *-rugu* occurred in a description of another picture where it was not the primary spatial relation. This example is:

Picture 38

- (100) *yu-lian iyeri le* *mua-rugu* *l-óba-wagu* *watu*
 sit-prog man this ground-RUGU P3ms-side-UWAGU fire
 ‘This guy is sitting on the ground next to the fire.’

This example shows *-rugu* coding location ‘on the ground’ that is not typical containment by a Ground. This is similar to the examples (92-93) above, which show *-rugu* alternating with *-uwagu* ON_G.

The final instance of *-rugu* from the TRPS data was that describing Picture 14 using the complex preposition *t-uragei-rugu* meaning ‘inside,’ as mentioned in section 2.2 . For example:

Picture 14 – Speaker 2

- (101) *i-ni-he* *katei* *t-uragei-rugu* *posu*
 exist-I3ms-exist something P3fs-belly-RUGU purse
 ‘There is something inside the purse.’

Because the noun ‘belly’ is within a person’s body and is associated with containment, it is unclear whether here *-rugu* is functioning to mark containment ‘in’ the ‘belly’ or location ‘at’ the ‘belly.’ Regardless, this complex preposition clearly codes containment.

¹⁹ The suffix *-lugu* seems to be an allomorphic variation of *-rugu*. The speaker of this study could not think of any other examples of this change and said that it was rare. Due to the common variation between the approximants(liquids) /l/ and /r/ crosslinguistically, allomorphic variation seems likely.

The small number of scenes that *-rugu* can code which do not code the semantics of containment by *control* or *surrounding*, question the semantics of *-rugu* as coding containment and suggest that *-rugu* may be a generic locative. However, because there are so few examples of this in the data, and due to Taylor's (1956a) translation of *-rugu* as 'within,' and the adverbial noun *-úrugu* 'interior' it is possible to hypothesize that it may be evolving into a more generic locative from a spatial gram coding containment. Note that *-rugu* can also be used for canonical relationships between a Figure and Ground. Pragmatic and interactional information about the Figure and Ground must therefore be considered. The fact that the specific spatial relationship, namely containment or control, may vary when *-rugu* is used shows that it codes a less specific spatial relationship than the prepositions *-ida* IN_G or *-uwagu* ON_G, which clearly code relations of containment and support/contiguity, respectively. However, a study with additional speakers and a larger amount of data should be conducted to investigate the spatial gram *-rugu* further. The data from the TRPS do confirm the semantics of *-rugu* as location and containment, but are not conclusive as to what degree non-containment scenes can also be coded by this suffix.

Table 9: <i>-rugu</i>		
Uses of <i>-rugu</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Containment	LOC _G
	General location of a Figure, possibly in some kind of canonical relationship with the Ground.	

3.2.2 *-un*

The suffix *-un*, as alluded to in the above discussion of the preposition, has a directional use. It too is used to show the direction towards a Ground. The data show it to be productive affixing to other spatial grams. However Taylor (1956a) describes *-un* in the same environment as *-gien*, which implies that it may affix directly to nouns. The data only show it to suffix to nominal stems that already have another spatial suffix, such as the suffix version of *-ida* (*-da*). It is clear that *-un* can suffix to other spatial grams, suffixes or prepositions, but additional data needs to be gathered to see if indeed *-un* has a parallel syntactic function to *-gien*.

Since the current data show no evidence of *-un* independent of its occurrence with other spatial grams, the semantics that arise when *-un* combines with other spatial notions will be explored. The following example shows *-un* combining with a nominal stem, which has a spatial suffix. The semantics of *-ida* IN_G (in suffix form *-da*) is combined with that of *-un* as follows:

- (102) *beluha-ru* *muna-do-un*
go-D3fs house-IDA-UN
‘She has gone into the house’

As mentioned above, this suffix combines with other prepositions to form complex prepositions. It usually adds a sense of motion towards the schema that the preposition dictates. The same semantic notion as shown in (102) also occurs when *-un* combines with the preposition *-ida* IN_G. When used with *-ida*, which invokes a container schema, the new complex preposition carries the semantics of ‘towards a state of containment’

which is similar to the English preposition ‘into.’ The following example describes a man walking into a church building:

- (103) *l-ebugwa* *t-ido-un* *liglisi*
 P1ms-go P3fs-IDA-UN church
 ‘He’s going into church’

The suffix *-un* can also combine with Garifuna prepositions in ways that do not have English equivalents. For example, it can combine with the preposition *-ubadu* NEAR_G to show a motion toward the state of being ‘near’ or towards a physical location:

- (104) *i-nu-gura* *ilena* *l-ubadu-n* *dábula*
 leave-I3fs-leave Elaine P3ms-UBADU-UN table
 ‘Elaine went next to the table.’

As is evident from the examples above, when *-un* combines with other morphemes there is phonological assimilation. The spatial gram *-un* is phonetically one syllable consisting of the nasalized vowel [ɪ̃]. If the last phone of the previous morpheme is [ɪ], that phone simply assimilates in nasalization; otherwise, there is often vowel averaging as in examples (102-103) above. This phonological reduction speaks to the level of grammaticalization *-un* has undergone. In its suffix form, this spatial gram no longer takes pronominal marking, exhibits morphophonological reduction, and has more reduced semantics than its prepositional counterpart. That is, the suffix variety of *-un* only codes direction, while the preposition variety can code direction, purpose and dative relations. According to Svorou (2002), these features show the high degree of grammaticalization of the suffix *-un*.

Since the scenes from the TRPS were strictly topological, no data from the picture series was found for *-un*. In sum, the suffix *-un* has a parallel function to its prepositional equivalent in the spatial/directional sense, but it is outside the scope of this study to determine if it has similar non-spatial functions.

Table 10: <i>-un</i>		
Uses of <i>-un</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Orientation/Direction of a Figure <i>towards</i> a Ground	ALL _G

3.2.3 *-gien*

The suffix *-gien*, which has the variant *-gian*, behaves similar to the suffix *-un* but codes the opposite semantics. Instead of showing direction towards a Ground, it shows a direction away from a Ground, marking the Ground as the origin. The data used for this study show few examples of *-gien* attached directly to nouns, but they do occur. For example:

- (105) *balisi-gian niabi*
 belize-GIEN 1sg.pro
 ‘I’m from Belize’

Picture 63 – Speaker 2

- (106) *i-ni-he aba lampu iyu-gien lasali*
 exist-I3ms-exist one lamp high-GIEN livingroom
 ‘There is a lamp from above in the living room.’

Here, *-gien* affixes to the noun for ‘Belize’ and ‘high,’ marking that noun as the origin of direction away.

This suffix is extremely productive in combining with other morphemes to make complex prepositions. The following examples show *-gien* with *-ida* IN_G. Here you can see that the result is a meaning similar to ‘through’ or ‘out’ in English.

- (107) *aba eibu la t-ida-gien muna*
 then walk LA P3fs-IDA-GIEN house
 ‘He walked out of the house.’
- (108) *n-afudura-gu-ia l-ida-gian dabiya*
 P1s-pierce-GU-prog P3ms-IN-GIEN forest
 ‘I’m taking a short cut though the forest.’

In example (108), the notion of ‘through’ is that of entering and exiting rather than ‘walking around/through the forest.’ Intuitively, we can see that in order for a Figure to be through or out of a Ground, it must first be contained by it and then move away. It is interesting that Garifuna codes containment and motion away separately in a complex preposition.

Also, the following example shows a complex preposition translated as ‘above’ made up of the preposition *-áu* and the suffix *-gien*. The preposition *-au*, which was briefly mentioned above, is known to function as the spatial use of English ‘around’ as well as the instrumental marker.

Picture 36

- (109) *yul-ia durari l-áu-gian ubu*
 sit-prog cloud P3ms-ÁU-GIEN mountain
 ‘The cloud is sitting above the mountain.’

Taylor (1956a) also translates this preposition as ‘above.’ The semantics of the preposition *-áu* are outside the scope of this study, and to fully understand how the schema involved in *-áu* combines with that of *-gien*, more data is needed. Another

example of *-gien* forming complex prepositions, that of *-wéigien*, was mentioned in the discussion on *-wéi* (see section 3.1.4). Other complex prepositions formed with *-gien* may also be in use in other non-spatial circumstances.

The suffix *-gien* also combines with nouns to form complex prepositions. Here we see how when *-gien* combines with the morpheme for ‘side,’ the result carries the meaning of ‘beside’ or ‘at one’s side’:

- (110) *i-nu-hu* *iliena l-óba-gian* *dábula*
 exist-I3fs-exist Elaine P3ms-side-GIEN table
 ‘Elaine is next to the table.’

- (111) *larama-ba* *n-óba-gien*
 stand-ba P1s-side-GIEN
 ‘Come stand beside me.’

The use of the *-gien* was limited to polymorphemic constructions in describing the TRPS data, showing the productivity of *-gien* in forming complex prepositions out of body part nouns similar to the examples above. It was used in the following constructions:

Picture 56

- (112) *i-ni-he* *fanidira* *l-igibu-gian* *bururu*
 exist-I3ms-exist flag P3ms-face-GIEN yard
iyu-ti *l-áhamaha*
 high-T3ms P3ms-fly
 ‘The flag is flying high in the front of the yard’ Lit: ‘The flag is in the front of the yard, it flies high.’

Picture 64

- (113) *l-aramuda-gu-yon* *t-amule* *l-anaga-gian* *haloü*
 P3ms-hide-GU-prog P3fs-brother P3ms-back-GIEN chair
 ‘Her brother is hiding behind the chair.’

Picture 16

- (114) *i-ni-he* *balü* *l-ábu-gian* *haloü*
 exist-P3ms-exist ball P3ms-behind-GIEN chair
 'The ball is under the chair.'

In each of these, *-gien* is affixed to nouns forming a complex preposition, marking the nominal element as an origin away from which the Figure is located. It is even possible that through its grammaticalization, the semantics of *-gien* have been eroded, and that it now has a grammatical function. The combination of *-gien* with relational nouns allows that combination to function as a preposition. Taylor (1956a) labels these nominals as adverbial nominals and translates the *igibu* as 'face,' *anaga* as 'backside,' *abu* 'behind.' The nouns *igibu* and *anaga* are still in standard use, however the combination with *abu* may be lexicalized.

Table 11: <i>-gien</i>		
Uses of <i>-gien</i>	Gloss of semantic notions coded	Abbreviation
Spatial	Orientation/Direction of a Figure <i>away from</i> a Ground	ABL _G

3.3 Summary

This chapter has provided a semantic description of the spatial uses of the Garifuna prepositions *-ida*, *-uwagu*, *-ubadu*, *-wéi*, and *-un*, and the suffixes *-rugu*, *-un*, and *gien*. In some cases non-spatial uses have been discussed. The findings of this chapter can be summarized by the following table of morphemes, semantic notions, and proposed abbreviations for these notions.

Table 12: Prepositions and Suffixes		
Uses of -ida	Gloss of semantic notions coded	Abbreviation
Spatial	<i>Surrounding</i>	IN _G
	<i>Control</i>	
	<i>Surrounding and Control</i>	
Uses of -uwagu	Gloss of semantic notions coded	Abbreviation
Spatial	<i>Contiguity</i>	ON _G
	<i>Control and contiguity</i>	
Non Spatial	Benefactive	BEN _G
Non Spatial	Malefactive	MAL _G
Non Spatial	About, concerning	ABOUT _G
Uses of -ubadu	Gloss of semantic notions coded	Abbreviation
Spatial	Proximity within a sphere of influence/ <i>region</i>	NEAR _G
Uses of -wéi	Gloss of semantic notions coded	Abbreviation
Spatial	Ablative notion of source in space.	SOURCE _G
Non Spatial	Ablative notion of source in time.	SOURCE _G
Uses of -un	Gloss of semantic notions coded	Abbreviation
Spatial	Direction of a Figure <i>towards</i> a Ground	ALL _G
Non Spatial	Dative marker	DAT _G
Non Spatial	Purpose	PURP _G
Uses of -rugu	Gloss of semantic notions coded	Abbreviation
Spatial	Containment	LOC _G
	General location of a Figure, possibly in some kind of canonical relationship with the Ground.	
Uses of -un	Gloss of semantic notions coded	Abbreviation
Spatial	Orientation/Direction of a Figure <i>towards</i> a Ground	ALL _G
Uses of -gien	Gloss of semantic notions coded	Abbreviation
Spatial	Orientation/Direction of a Figure <i>away from</i> a Ground	ABL _G

This study has not aimed to conclusively give the central senses of each spatial gram, nor has it attempted to carefully describe all the non-spatial senses. What has been produced is a clear sketch of the spatial uses of each gram. Further studies should work towards determining the metaphors using space in Garifuna and how spatial senses are mapped onto non-spatial uses.

4.0 Space in Garifuna

Chapter 3 provided a description of the monomorphemic spatial grams in Garifuna that are used primarily for spatial relations. But simply looking at each morpheme individually does not give a picture of how Garifuna uses those morphemes to cover spatial relations. How does Garifuna talk about space? How is semantic space organized? These are all very broad questions, so in order to answer them, the scope of these questions will be narrowed to topological space.

Levinson et al. (2003) ask similar questions in their study of topological spatial notions. Their study aims to test the notion of whether spatial notions like IN, ON, and UNDER are primitive and agreed on by all languages. In doing so, they look at how adpositions were applied to the same set of spatial scenes in 9 different languages, including 4 isolates and 5 from different language families. Then, for each language, speakers described pictures from the TRPS (see Ch.1 for a description of the TRPS). The data gathered from these pictures were evaluated for each language and compared crosslinguistically. The researchers tried to arrange the pictures in such a way that boundaries between morphemes would vary crosslinguistically, but the notional categories would remain contiguous. These results did not support the idea of the same semantic notions across all languages. Nonetheless, through an analysis of the dissimilarity of pictures (see Levinson et al. 2003 for more details) they did find that the meanings of the spatial grams from these languages clustered around the notions of IN, NEAR/UNDER, ON-TOP, ON/OVER, and ATTACHMENT; however, some languages did not adhere to the clusters.

Another finding of this study is the implicational scale of adpositions below.

Figure 1: Implicational scale of adpositional notions adapted from Levinson et al. (2003)

This scale has roots in Johnston and Slobin's (1979) study on the acquisition of prepositions. According to this scale, if a language has an adposition for any given notion on this scale, that language will also have adpositions for notions to the left of that notion. For example if a language has an adposition INSIDE the language would also have adpositions to the left of that adposition, namely ATTACHED, ON-TOP, etc. As Levinson et al. have noted, this scale is not a sufficient description of these notions because a language with adpositions for only AT, IN, and ON will have a different notion of ON than for a language that also has ON-TOP or OVER. Despite this, because this scale generalizes over most of the languages in their sample, it does provide a way to predict the presence of certain adpositions, based on the presence of others that are further to the right on the scale.

In order to describe an overall pattern of how Garifuna organizes topological space semantically, data gathered from the same picture set Levinson et al. (2003) used (TRPS) will be described. In doing so, three main questions will be addressed:

- 1) By organizing the pictures based on the spatial grams used, and the type of spatial scene, can clear boundaries be drawn between usages?
- 2) Are the Garifuna categories consistent with the notional categories of IN, ON, OVER, UNDER, NEAR, and ATTACHED presented in Levinson et al. (2003)?

3) Does the Garifuna system of spatial grams support the implicational scale provided by Levinson et al. (2003)?

The answers to these questions will provide a more broad illustration of the grammatical notions Garifuna uses to talk about space as well as compare and contrast Garifuna behavior with respect to current research in this area.

4.1 Boundaries and patterns of topological space

This section will discuss Question 1 posed above. The first part will address how Garifuna spatial grams cover the topological space as portrayed by the TRPS, and the second will discuss non-spatial-gram grammatical constructions that Garifuna uses to talk about these relations.

4.1.1 Areas of space coded using spatial grams

By examining the uses of the individual spatial grams in Chapter 3, we have seen that the relevant features of spatial scenes are surrounding and control, contiguity, proximity, and motion or orientation towards or away from a Ground. To further examine how Garifuna makes distinctions in spatial scenes, the uses across the pictures from the TRPS will be examined. The pictures have been arranged such that (1) each picture is next to another that is coded by the same spatial gram, and (2) pictures next to each other depict spatial scenes with similarities, as judged by myself. See Figure 2 to follow the discussion (Appendix E contains the key for all the following tables). The purpose of this arrangement is to delineate the boundaries, as well as the overlap, drawn by the use of different spatial grams. This will show where the distinction between two spatial grams is made within topological spatial relations and where there is variation between spatial grams.

Figure 2: Array of TRPS Data Arranged by Garifuna Spatial Grams

First of all, notice that a majority of pictures are coded by the preposition *-uwagu*. Despite the fact that spatial relations with different details are within the group of pictures coded by *-uwagu*, the most pervasive of those relations is support. As mentioned in Chapter 3, *-uwagu* is used to describe scenes that depict *prototypical support*, *support by contiguity*, *support by partial containment*, and *support by attachment*. Looking at F3 through F10 in Figure 2, the use of *-uwagu* for scenes with *prototypical support* (see section 3.1.2.1) is displayed. Extending out from this region, to the right, there are scenes of *support by contiguity* (including the use of the suffix *-wagu*), to the left scenes of *attachment*, and to the left and above (D-E3), support with *partial containment*. Because the element of support is common to the pictures mentioned above, it is clear that support is relevant to linguistic classification for a wide variety of spatial scenes, but the point of interest here is what needs to change in a spatial scene to motivate a morpheme change.

Let us examine the overlap of scenes coded by *-uwagu* and *-ida*. This overlap lies between rows 2-3, columns D-E. The pictures here have partial surrounding of a Figure by a Ground and both *-ida* and *-uwagu* can be used. Also, in Picture 28 (E2), the Figure ‘head’ can be viewed as surrounded or contiguous to the Ground ‘stamp.’ The overlap shown here affirms that when the surrounding is questionable, an alternation with *-uwagu* may be permissible (as shown in section 3.1.1). By looking at the pictures for which only *-ida* is permissible, we can see that *-ida* is clearly used for spatial scenes showing control by surrounding. These may be considered the prototypical scenes for *-ida*.

Another picture using the morpheme *-ida* is located in C3. Picture 30 can be coded by the complex preposition *-idagien*, which as discussed in section 3.2.3 translates to ‘through’ or ‘out.’ This picture shows containment by the surrounding of part of the Figure, but in a way that most of the Figure ‘arrow’ was once contained by the Ground ‘apple’ but is now through and away from it. This scene exemplifies the combination of the schema for containment with that of direction away.

Staying in the region of Figure 2 where containment is depicted, notice the boundary in the Figure between the use of the preposition *-ida* and the suffix *-rugu* (A1-2). Only two pictures were described by the suffix *-rugu*, so despite the patterns that are evident, more data are still needed. We have seen that *-rugu* does code some kind of containment, but from these pictures it can be assumed that surrounding may not need to be complete, but control may be more salient. As mentioned in section 3.2.1, it may be the canonical relationships in these pictures that determine the use of *-rugu*.

There are also various spatial scenes where either *-ida* or *-rugu* can be used.

Notice these examples from the general elicitation.

- (115) *ebun-ian* *l-ida* *duna*
 walk-prog P3ms-IDA water
 ‘I’m walking in the water.’

- (116) *ebun-ian* *duna-rugu*
 walk-prog water-RUGU
 ‘I’m walking in the water’

- (117) *n-ebagu-ian* *l-ida* *dabiyara*
 P1s-run-prog P3ms-IDA forest
 ‘I’m running in the forest.’

- (118) *n-ebagu-ian dabi-yara-rugu*
 Pls-run-prog forest-RUGU
 ‘I’m running in the forest’

In other examples, *-rugu* has been primarily used for Figure-Ground relationships that are canonical for a particular Figure-Ground pair, e.g. ‘boat on water,’ ‘cigarette in mouth,’ ‘pain in stomach,’ ‘person in house’ etc. These relationships are not just spatial: but in many cultures they may be the ‘proper’ or ‘normal’ locations of these Figures, their given Grounds. Further pragmatic or interactional information about the Figure and Ground may also govern the use of *-rugu* versus *-ida*.

The pictures in C-D4, D5 and B-E10 can be coded by *-uwagu*, as well as other prepositions, but are adjacent to similar scenes that are coded by *-uwagu*. As described in Chapter 3, *-wéigien* (C-D4, D5) can be used for coding a scene where the Figure is hanging from some Ground. The pictures adjacent to these also have this type of scene, but *-uwagu* is used. Pictures in row B-E10, which depict a Figure wrapped around a Ground, are coded by *-au* ‘around,’ while pictures adjacent to these, which also have the Figure wrapped around the Ground, are coded by *-uwagu*. Pictures in row D-E10 vary between speakers as coded by either *-uwagu* or *-áu*. Because *-uwagu* is used for a wide variety of scenes coding support, these pictures with alternate codings appear to be described by a spatial gram that is more fine-grained. The types of scenes coded by *-wéigien*, Figure hanging off Ground, and those coded by *-áu*, Figure wrapping around Ground, are also coded by *-uwagu*. Speaker 2 coded Picture 27 (D4) with *-uwagu* but said that to be more specific people could use *-wéigien*. When *-wéigien* or *-áu* is used, instead of *-uwagu*, they home in on the manner of position, as in *-áu* ‘around,’ or the

origin of the Figure, as in *–wéigien* ‘off,’ of the Figure and Ground rather than the functional control of the Figure by the Ground.

The pictures that remain to the right and above of those coded by *–uwagu* ON_G are described by complex spatial grams. They also represent a shift in the spatial scenes where contiguity, and thus support are no longer a part of the scenes or codings. In column F1-2, there is the use of *–áugien* ‘above.’ Here the vertical relationship of the Figure and Ground is similar to that of the scenes coded by *–uwagu* ON_G below them, but the Figure is no longer contiguous with the Ground. The lack of support necessitates a different morpheme to code these scenes.

From I6 rightward, the scenes are not described by monomorphemic spatial grams coding support, but instead by polymorphemic spatial grams using relational body part terms and the suffix *–gien*, as described in section 3.2.3. These show that when containment or support are not present in a spatial scene, Garifuna speakers may use these relational terms to describe the location of a Figure with respect to a Ground. This supports Svorou (2002), who generalizes about the grammaticalization of locative constructions. She proposes a continuum of the likelihood that a locative construction reaches an advanced stage of grammaticalization depends on the kind of region it refers to. The most likely to be grammaticalized are spatial grams referring to an interior region, and the least likely are those referring to front, back, or lateral regions. Garifuna definitely exemplifies this continuum with monomorphemic prepositions like *–ida* IN_G and *–uwagu* ON_G being at one end, and complex prepositions like those relational nouns affixed with *–gien* ABL_G on the other.

The pictures with dotted lines surrounding them had a use that did not fit into this categorization by spatial scenes and spatial grams. These will be discussed in section 4.1.2. Picture 60 (B3) shows the use of the preposition *–mida*, which Taylor (1956a) describes as a French borrowing meaning ‘in the middle of.’ Picture 43 (G9) was described by Speaker 1 with multiple spatial grams as follows:

Picture 43

- (119) *degeguwa* *hozu* *mua-rugu-gian* *l-uwagu* *l-igibu*
 straddle hose ground-LOC_G-ALB_G P3ms-ON_G P3ms-tree
 blagu *deyaladagaru* *l-uwagu* *leyaba* *oba*
 block DEYALADAGARU P3ms-ON_G LEYABA side
 ‘The hose is spread from the ground across to the top of the stump and
 then back to the ground on the other side’

The level of description of this picture is interesting because it shows that Garifuna does not have a spatial gram that conveys the meaning of the English preposition ‘across.’

While eliciting Picture 43, Speaker 1 was asked various questions to see if there was another way to describe this spatial scene using one preposition as primary, but there was not. To talk about an active scene involving the notion of going ‘across,’ Garifuna speakers use the verb *hinugwa* ‘to go across.’ To talk about stative notions of ‘across’ as in Picture 43, speakers can describe by various methods the Figure stretching from one end to the other of the Ground. This is similar to Greek, and other languages, where there is also no spatial gram that carries the meaning of ‘across.’ The Greek²⁰ description of this picture would be:

- (120) *to* *lastixo ine* *aplomemo* *pano* *apo* *to* *kormo*
 the hose is spread over from the stump
 ‘The hose is spread over from (across) the stump.’

²⁰ Thank you to Roula for the Greek example.

Talmy (1983) also hypothesizes that the notion of ‘across’ is not common to many of the world’s languages. This kind of data affirms the fact that not all languages code the same spatial notions in the same way. The fact that Speaker 2 used *-uwagu* to code Picture 43 also shows that *-uwagu* codes a more general spatial relationship that can still be used for this type of support.

Another method Garifuna speakers used to describe spatial relations within the TRPS is with a relational noun. Speaker 2 was the only speaker to employ this method, and though there are many relational nouns, only the noun *ábulugu* ‘head’ was used in this data set. For example:

Picture 7 – Speaker 2

(121) *i-ni-he* *anasi* *t-ábulugu* *muna*
 exist-I3ms-exist spider P3fs-head house
 ‘There is a spider on the roof of the house.’

Picture 34 – Speaker 2

(122) *i-ni-he* *aba* *gurigea* *t-ábulugu* *muna*
 exist-I3ms-exist one person P3fs-head house
 ‘There is a man on top of the house.’

Picture 49 – Speaker 2

(123) *i-ni-he* *ubanoü* *t-ábulugu* *ligilisi*
 exist-I3ms-exist leaf P3fs-head church
 ‘There are leaves on the top of the church.’

In these examples, the noun ‘head’ is used to show the spatial location of ‘at the top’ (Brugman, 1983). Svorou (1994) discusses many examples of body part nouns such as this being used in languages to denote spatial relations. According to Svorou, the fact that Garifuna uses ‘head’ to refer to the top of something rather than the front shows that Garifuna employs an *anthropomorphic model*. This means that speakers use the model of the human body and orientation from which to generalize other spatial relations. The use

of *anaga* ‘back’ in the complex preposition *anagagien* ‘in back of’ also supports the use of this model.

The final method exhibited to code spatial relations in the TRPS is the use of spatial grams corresponding to English ‘inside’ and ‘outside.’ The former was motioned in Chapters 2 and 3 and is a complex preposition made up of the noun ‘belly’ and the suffix *–rugu*. For example:

Picture 14 – Speaker 2

(124)	<i>i-ni-he</i>	<i>katei</i>	<i>t-uragei-rugu</i>	<i>posu</i>
	exist-I3ms-exist	something	P3fs-belly-RUGU	purse
	‘There is something inside the purse.’			

The latter *bogudi*, is labeled as an adverb by Cayetano (1993) and functions adverbially.

For example:

Picture 6

(125)	<i>yu-l-ian</i>	<i>ounli</i>	<i>bogudi</i>	<i>t-un</i>	<i>l-uba</i>
	sit-P3ms-prog	dog	outside	P3fs-UN	P3ms-house
	‘The dog is sitting outside his house.’				

The word *bogudi* is a spatial gram because it denotes a spatial relation; however, it does not take pronominal marking in the same way that prepositions do. It is also not clearly made up of other spatial grams. The morpheme *–un* also functions as a spatial gram in some cases, but in this sentence it has a grammatical function because there are no semantics of direction, transfer of object, or purpose coded by this sentence. To further understand how *bogudi* is functioning, notice the following examples. The first example below (126) illustrates the same use of *bogudi* as in Picture 6, that is with the preposition *–un*.

- (126) *i-ni-he* *bogudi* *t-un* *muna*
 exist-I3ms-exist outside P3fs-UN house
 ‘He's outside the house.’

The following example with *bogudi* and the suffix *-gien* also functions adverbially:

- (127) *le* *t-agebei* *baliha* *bogudi-gian* *guera*
 this.m P3fs-covering suitcase outside-GIEN leather
 ‘The covering of the suitcase on the outside is leather.’

The following example shows *bogudi* in predicate position with an inflection.

- (128) *bogudi-yen* *t-úbadu* *uguney*
 outside-YEN P3fs-NEAR_G vehicle
 ‘He's outside by the car/vehicle.’

It is unclear what kind of inflection this is because neither Taylor (1956a), nor any other sources, mention it as a suffix. It is outside the scope of this thesis to investigate this more thoroughly, but these examples continue to show Garifuna morphology as rich and flexible, so as to further identify the status of the word *bogudi*, as well as other morphemes that function similarly, additional data are needed.

4.1.2 Areas of space coded using non-spatial grams

Some of the pictures in the TRPS (G5-8, A2, C2) were described using non-spatial grams. Though these were not included in the discussion and description of spatial grams, the other grammatical methods Garifuna speakers employ to express spatial relations are of interest. There were two constructions where non-spatial grams were used. The first was the attributive prefix *g(a)-*. Taylor (1956a) describes the attributive prefix as converting nouns and verbal nouns into adjectives. Garifuna is a zero copula language and words that designate properties, which would be classified as

adjectives in English, are predicates that take verbal marking. The attributive construction was used for spatial relations showing partial containment (Picture 62), attachment (Picture 61), and support (Pictures 18 and 29) so it is clear that it does not code a specific spatial scene. Some examples of the attributive used to describe a spatial relation are as follows:

Picture 5

- (129) *ga-bunidi-ti*
att-hat-T3ms
‘He wears a hat.’

Picture 5

- (130) *ga-bunidi-ti* *l-uwagu* *l-ichugu*
att-hat-T3ms P3ms-UWAGU P3ms-head
‘He wears a hat on his head’

Picture 18

- (131) *ga-huyu-tu* *tuwaya*
att-hole-T3fs towel
‘There is a hole in the towel.’

Picture 21

- (132) *ga-sabadu* *l-uwagu* *t-ugudi*
att-shoe P3ms-UWAGU P3fs-foot
‘She has a shoe on her foot.’

The data show that some specific spatial relation between the Figure and Ground can be assumed when the attributive is used, as in the descriptions of Pictures 5 and 18, but if the speaker wants to clarify further, a prepositional phrase can follow. This is similar to the use of ‘have’ in English. For example, a man with a hat on can be described as ‘He has a hat (on).’ Or a description of a towel with a hole in it could be ‘The towel has a hole (in it).’

When these prepositional phrase alternatives were not offered by Speaker 1, and the English translation included a spatial relation, as in Picture 18, the author did not press to extract the prepositional phrases because they may not be natural to the speaker. Those phrases that used the attributive as well as a prepositional phrase were grouped with other pictures that were described by spatial grams and were discussed above. It is interesting; however, that Speaker 2 coded all these scenes with *-uwagu*. Her use of *-uwagu* seemed to be more general than that of Speaker 1.

The other type of non-spatial gram used to describe scenes, by Speaker 2, from the TRPS were two types of what appear to be nominal constructions. They are as follows:

Picture 11 – Speaker 2

(133)	<i>i-nu-he</i>	<i>guyiera</i>	<i>barana-ha</i>
	exist-I3fs-exist	boat	sea-HA
	‘The boat is at sea.’		

Picture 71 – Speaker 2

(134)	<i>i-ni-he</i>	<i>ounli</i>	<i>le-bene-ri</i>
	exist-I3ms-exist	dog	P3ms-door-RI
	‘There is a dog at the doorway.’		

Both of these sentences have a verb as their first element, so despite the inflections on the spatial gram, which is the last element, these spatial grams do not appear to be predicates. It is unclear exactly what syntactic function these have, but they are made up of the clear nominal elements ‘sea’ and ‘door’ respectively. It is interesting to note that it may be possible to code the location of a Figure by juxtaposing it with the nominal element corresponding to the Ground.

From the examples above, we are reminded of the versatility of Garifuna, how different points of view may alter the way a scene is described, and also that the same objective scene can be construed differently.

4.2 Spatial notional categories

This section will answer question 2 presented above. In their study, Levinson et al.'s (2003) data did not support the hypothesis that the adpositions of all languages code the same topological concepts, but the data did cluster around notions of IN, NEAR/UNDER, ON-TOP, ON/OVER, and ATTACHMENT. It would be of interest to see how or if these clusters would be different if Garifuna had been included in the data set analyzed by Levinson et al., but because this cannot be tested currently, the notional categories of topological space represented by the TRPS and whether the Garifuna data support these notional categories will be examined. Comparing the way Garifuna groups this standard set of pictures based on the spatial gram with these notional categories makes it possible to compare the behavior of Garifuna spatial grams with those from other languages.

In order to see how the Garifuna data patterned with respect to the generalized semantic notions, the pictures were arranged in the fixed array presented in Levinson et al. (2003).²¹ This array was made in Levinson et al.'s attempt to create one array for which all the languages in their study could apply. Levinson et al. hypothesized that

If the topological domain has a similar internal coherence, it should be possible to find a single fixed arrangement of the pictures such that those that are grouped

²¹ To see the fixed array with notional categories without the Garifuna data see Appendix F. For readers who are interested in the variation within speakers, not between them, the data from Speakers 1 and 2 are presented in the fixed array in Appendices G and H, respectively.

together in one language could remain contiguous even if they are separated by a category boundary in another. (p. 499)

They were not successful at finding such an arrangement, however the array that was the ‘best fit’ did group the pictures in some coherent notional categories. Using the same fixed array, borders were then imposed around the pictures that Garifuna treated with the same spatial gram (see Figure 3). By superimposing the boundaries of the notional categories on the fixed array of Garifuna data, it is possible to see where Garifuna spatial grams correspond to these notional semantic categories.

First, let us examine the notional categories that Garifuna spatial grams correspond with. The notional category of IN almost completely corresponds to the morpheme *-ida*. The deviation is that *-ida* can alternate with *-uwagu* for the scenes coding partial containment, as discussed above. Near the IN cluster and within the scenes coded by *-ida* are the two scenes coded by *-rugu*. The facts that the pictures here show containment and that they are so close to those pictures coded by *-ida* IN_G reinforce the notion that *-rugu* does code some kind of containment, but may not do so to the same degree as *-ida*. The other notional category that Garifuna morphemes correspond with is that of UNDER. All the pictures in this category were described by both speakers by the complex preposition *-ábugien*. The agreement of what is coded by *-ábugien* and what is categorized by UNDER according to Levinson et al. is suggestive that *-ábugien* codes a general semantic notion of UNDER.

Figure 3: Fixed Array of data from Speakers 1 and 2 superimposed with notional categories

In the case of the OVER notional category, there are only two pictures in the category, and one of them Speaker 1 described with *-ida* because she understood the lamp cord to be the Figure and described it as being ‘in the ceiling’ rather than a ‘lamp over a table.’ Speaker 2 at first described this ‘handle of the lamp’ as being ‘up high,’ but when asked where the lamp was she used the complex preposition *-áugien*. The other picture in this category was described also by *-áugien*. This complex preposition has been translated as ‘over’ by the consultants and Taylor (1956a). The other picture described by *-áugien* is Picture 35, depicting a bandage on a foot. This picture is within the boundaries of the OVER notional category because Speaker 1 described this as ‘the bandage is over the ankle,’ rather than ‘the bandage is on the leg.’ This is simply a matter of looking at the Figure and Ground from a different point of view than was intended by the TRPS. The lack of correspondence of the Garifuna data to the pictures in the OVER notional category can be mostly attributed to a lack of pictures displaying this notion. This thesis hypothesizes that if there had been more pictures depicting this notion, *-áugien* would be affirmed as corresponding with the notion of OVER.

The notional category of ON corresponds to scenes coded by *-uwagu*, with the variation of Picture 23 which was coded by *-igibuógu* ‘on-top.’ This does not discount the statement that the semantics of *-uwagu* correspond to the notional category of ON, but it does show that Garifuna can further specify a relation of vertical support as *-igibuógu* ‘on-top’ if desired.

The notional categories of ON and ATTACHED are encompassed mostly by the preposition *-uwagu*, but also *-wéigien* and *-áu*. This supports the claim of this thesis that

scenes of attachment can be coded by *-uwagu*. It also suggests that languages that do not have a spatial gram that codes attachment may use notions of contiguity and support to code these scenes. The fact that *-wéigien* and *-áu* are within the boundaries of scenes coded by *-uwagu* also supports the idea that different spatial grams focus on different elements of the same spatial scene as mentioned in section 4.1.1.

The final notional category depicted in Figure 3 is that of NEAR. No one spatial gram from Garifuna was used to describe the pictures in this category. However, the pictures in the category of NEAR were described by complex prepositions using relational nouns that provide more detail about the Figure and Ground. For example, Picture 64 was described by both speakers with the complex preposition *-anagagien* ‘behind.’ Notionally, NEAR may encompass ‘behind,’ but ‘behind’ provides further directional detail. To test the notion of NEAR further, this thesis suggests using pictures that have less possibility of coding with a more specific spatial gram.

In order to see how Garifuna patterns crosslinguistically, the data from this study would need to be compared statistically with that of Levinson et al.. However, by analyzing how the Garifuna spatial grams correspond to the notional categories of IN, ON, OVER, ATTACHED, UNDER, and NEAR, this thesis has shown that the morphemes *-ida* and *-rugu* can code category of IN, *-uwagu* codes the category of ON, *-áugien* codes the category of OVER, and *-ábugien* codes the category of UNDER. Garifuna does not have a spatial gram to code the notion of ATTACHED, and the notion of NEAR may be coded by a variety of spatial grams. Therefore, the Garifuna data do support notional categories of IN, ON, OVER, and UNDER, but not necessarily those of

ATTACHED and NEAR. It has also been shown that Garifuna codes the notions of IN and ON with monomorphemic spatial grams, but when spatial scenes involve more complex notions, complex polymorphemic prepositions are employed.

4.3 Scale of topological notions

This section will address question 3 posed above. As given in section 4.0, another finding of Levinson et al. (2003) was the implicational scale of adpositional notions. Levinson et al. concede that there are many other grammatical morphemes that code topological relations, but chose to focus on adpositions for their study. Looking at solely the prepositional system of Garifuna, without regards to the suffixes, the data clearly do not support the implicational scale of adpositional notions suggested by Levinson et al. (2003). First of all, Garifuna, does not have a preposition to code the notion of AT; however, because Levinson et al. did not show any clustering for this notion, it is unclear which pictures from the TRPS were meant to elicit AT. Garifuna does have prepositions to code IN, ON, UNDER, OVER, NEAR and ON-TOP. No notions above this point on the scale are represented in Garifuna by spatial grams. Therefore, if the notion of AT were excluded, the scale would also describe Garifuna's prepositions.

Of the notions in the scale that Garifuna does express by prepositions, IN, ON, and NEAR are expressed by the monomorphemic prepositions *-ida*, *-uwagu*, and *-ubadu* respectively. The notions UNDER and OVER and ON-TOP are expressed by the complex prepositions *-ábugien*, *-áugien*, and *-igibuóugu* respectively. As discussed above, the first and third contain the suffix *-gien* on body part terms. The second is made

up of the body part term for ‘face’ *igighu* and the reflexive or alternate version *-uwagu* in suffix form.

With regards to the notion AT, the suffix *-rugu* often carries this kind of semantic notion. However, as described in section 3.2.1, scenes coded by *-rugu* tend to involve some kind of containment. The pictures in the TRPS for which *-rugu* was used also show containment, with the exceptions mentioned in Chapter 3. This study has also shown that the use of *-rugu* tends to involve pragmatic considerations. Despite these semantic components of *-rugu*, it is the closest spatial gram Garifuna has to a general or unmarked locative. The notion of AT generally functions to relate a Figure and a Ground at some point, without any other specified spatial configuration. Because Garifuna codes the notion of AT with a spatial gram that often involves containment or pragmatic information, it may be that the notion of AT does not only involve location at a point. This raises the question of whether or not in a general sense AT does presuppose some kind of containment. If a Figure is located AT a Ground, that Figure is somehow contained within a *region* projected from the Ground.

In English, ‘at’ also implies that the behavior characteristic to some location is present. For example, ‘John is at church’ not only designates a spatial location, but ‘to be at church’ usually implies that a person is taking part in the activities that usually happen in a church, namely a service of sorts. Given that *-rugu* implies containment, but functions as a locative similar to AT, and ‘at’ of English implies some kind of action or behavior, the idea of the language independent notion of AT is in question and further investigation is needed in this area.

The main challenge to this implicational scale that the Garifuna data present is that it is a scale of *adpositional* notions. If this were considered a scale of topological notions, including notions coded by other syntactic categories, the only remaining questions would be the ones having to do with the semantics of AT, as noted above. When researchers study spatial notions, the way those notions are realized should not be limited to particular grammatical constructions or functional morphemes, for example, adpositional phrases or adpositions. If so, certain spatial grams may be overlooked due to their place on the continuum of fusion. In order to examine the systems people use to talk about space it is necessary to see what methods they employ and how those methods complement each other. In further studies on topological notions, this thesis proposes that implicational scales not be limited to adpositions, but refer to all *closed-class* items that express these notions.

4.4 Summary

This chapter has compared the Garifuna system of spatial grams with the recent work of Levinson et al. (2003) in order to see how the system as a whole functions to code topological space. The spatial grams Garifuna uses to code these relations, the boundaries between usages of grams, as well as alternate methods for coding spatial relations have been discussed. This chapter has also shown that Garifuna does have spatial grams that correspond to the notional categories of IN, ON, UNDER, and OVER. We have seen that Garifuna uses monomorphemic prepositions for the notions of IN, ON, and NEAR, a suffix for the questionable notion of AT, and complex prepositions for other notions. The complex prepositions do correspond to notional categories of UNDER

and OVER, and other relations such as the English words for ‘behind,’ ‘in front of’ ‘on top of,’ and ‘on the side of.’

This section has discussed, in relation to Garifuna, some of the notions identified in the Levinson et al. (2003) crosslinguistic study. Further research should investigate how language systems as a whole, including suffixes, case marking, adverbs etc code spatial relations. More crosslinguistic studies will continue to shed more light onto which spatial relations notions are universal and which are language specific.

5.0 Conclusion

This thesis has provided a brief syntactic description and a semantic sketch of the Garifuna monomorphemic spatial grams used to code spatial relations. These include the prepositions *-ida* (IN_G), *-uwagu* (ON_G, BEN_G, MAL_G, ABOUT_G), *-ubadu* (NEAR_G), *-wéi* (SOURCE_G), and *-un* (ALL_G, DAT_G, PURP_G) and the suffixes *-rugu* (LOC_G), *-gien* (ABL_G), and *-un* (ALL_G). Through an examination of the uses of the individual spatial grams in Chapter 3, it was shown that the relevant features of spatial scenes are *surrounding* or *control* for *-ida*, *contiguity* or *control* for *-uwagu*, proximity for *-ubadu*, and motion or direction towards a Ground for *-un*, or away from a Ground for *-wéi* and *-gien*. When speakers wish to specify the location of a Figure with respect to a Ground that displays a more complex spatial relationship, polymorphemic prepositions using relational nouns are used. This thesis has also shown that canonical or interactional information about the Figure and Ground may play a part in the selection of a spatial gram, especially in the case of *-rugu*.

The results of this study also help resolve some of the discrepancies in the labeling of the spatial grams discussed here. It has provided glosses that reflect the different semantic uses of each spatial gram. In addition, prepositions follow the continuum of the likelihood of a locative construction reaching an advanced stage of grammaticalization proposed by Svorou (2002). The monomorphemic, and presumably more grammaticalized, preposition *-ida* IN_G codes notions of interior regions, while polymorphemic, and presumably less grammaticalized, prepositions code notions describing a front, back, or lateral region. The suffixes *-rugu*, *-un*, and *-gien* also show

advanced stages of grammaticalization because they are bound to a spatial gram or nominal stem, lack obligatory marking, and when more complex spatial information is coded, it is coded by a preposition rather than a suffix. Therefore, we can conclude that Garifuna spatial prepositions, both mono- and polymorphemic may code detailed semantic information such as spatial and functional geometry, while spatial suffixes code more general semantic information such as location or direction.

Even though Garifuna is structurally very different from English, the results of this semantic analysis of Garifuna spatial grams show a similarity to the semantics of English spatial grams. The prepositions *-ida*, *-uwagu*, *-ubadu*, *-wéi*, and *-un* have similar spatial semantics to English ‘in,’ ‘on,’ ‘near,’ ‘from,’ and ‘to,’ respectively. The preposition *-uwagu* even extends to the malefactive as does English ‘on;’ however, *-uwagu* also extends to the benefactive, where ‘on’ does not. The preposition *-un* extends to express dative relations and purpose as does English ‘to.’ The suffixes *-un* and *-gien* also correspond roughly to English ‘to’ and ‘from;’ however, their productivity at combining with prepositions or adverbial nouns is far beyond the behavior of the English counterparts, but similar to languages like Greek. The Garifuna suffix *-rugu* at times corresponds to English ‘at,’ but differs in its tendency to code containment and locative relations.

With regard to spatial notions, Garifuna has monomorphemic prepositions that correspond clearly to the notional categories of IN and ON, and polymorphemic prepositions for the categories of OVER and UNDER. This thesis also shown that when semantic notions are studied, attention should be paid to all closed-class spatial grams,

not just adpositions. Including suffixes in this study of Garifuna has shown not only the notions coded by the suffixes alone, but what kinds of notions are expressed through the combination of suffixes, prepositions, and relational nouns. This thesis has also raised questions about the notional category of AT. The Garifuna spatial suffix *-rugu* codes the general location of AT; however in many scenes *-rugu* codes containment. Does the category of AT simply code location without regard to spatial configuration? Does this category reflect canonical or interactional information about the Figure and Ground? It would be of interest to investigate the grams from other languages that function as AT to see if these morphemes also code any scenes that portray containment, support, or interaction between the Figure and Ground.

Despite the findings of this thesis, the limitations of the study need to be addressed. The most obvious limitation of the study is that it was carried out with information gathered from only two consultants. This data may not be representative of all Garifuna speakers; however, the focus on such basic spatial relations does allow the data from this study to be used as a starting point for other studies, both cross-linguistically and across more Garifuna speakers. The use of only two consultants also allowed an in depth discussion of the semantics of each morpheme. This has resulted in a focused qualitative study rather than a quantitative study with a large number of speakers.

Secondly, a general result of the elicitation of data with a picture set is that the stimuli can affect the elicitation. In this regard, the results gathered from the TRPS may be an artifact of the scenes portrayed in the pictures. However, this study did find that the data gathered from these pictures were consistent with the data from the general

elicitation session for similar spatial scenes. Using this set of pictures, which has been used in a variety of other studies, also makes the Garifuna data available for crosslinguistic comparison. The data from the TRPS adds an element of standardization that would not be possible with the general elicitation alone.

Most importantly, this thesis has added to the body of work on the language of Garifuna. The spatial grams which were focused on now have a clear semantic description of their spatial uses. There is much more investigation to be done to thoroughly describe the semantics of Garifuna spatial grams, particularly in the area of metaphorical extension. More work in this area will continue to describe the intricacies of Garifuna as well as add to the work on conceptual structure in cognitive linguistics.

It would also be interesting to study the other Garifuna words Cayetano (1993) labels as prepositions that do not primarily code spatial relations. Because nouns and prepositions both take pronominal marking, it is unclear whether these words function as relational nouns or as prepositions. A study of these grams will help to find out what morphemes they may be composed of, at which stage they are on the noun-preposition continuum. Work on these morphemes could also produce a kind of scale of fusion for Garifuna. As has been mentioned in this thesis, the productivity of combining spatial prepositions and relational nouns with spatial suffixes is very high. Both prepositions and nouns can take suffixes, and the relational nouns taking suffixes can function together as a polymorphemic preposition. It would be interesting to examine these polymorphemic constructions to see if they are older combinations that have been

lexicalized and determine how productive this process of combining prepositions or adverbial nouns with spatial suffixes is.

References

- Brugman, C. (1983). The use of body-part terms as locatives in Chacatongo Mixtec. In A. Schlichter et al. (Eds) *Studies in Mesoamerican Linguistics*. Berkeley, CA: University of California.
- Cayetano, R. (1993). *The People's Garifuna Dictionary*. Dangriga, Belize: National Garifuna Council of Belize.
- Ekulona, T.B. (2000). The *ba* morpheme in Garifuna. Master's thesis, University of California, Los Angeles.
- Garrod, S., Ferrier, G., & Campbell S. (1999). In and On: Investigating the functional geometry of spatial prepositions. *Cognition*, 72, pp.167-189.
- Heine, B, Claudi, U. & Hünemeyer, F. (1991). *Grammaticalization*. Chicago, IL: The University of Chicago Press.
- Heine, B. & Kuteva (2002). *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press.
- Herskovits, A. (1986). *Language and spatial cognition : an interdisciplinary study of the prepositions in English*. Cambridge: Cambridge University Press.
- Hopper, P.J. & Traugott, E.C. (1993). *Grammaticalization*. Cambridge: Cambridge University Press.
- Johnston, J.R. & Slobin, D.I. (1979). The development of locative expressions in English, Italian, Serbo-Croatian, and Turkish. *Journal of Child Language*, 6 pp. 529-45.
- Lakoff, G. (1987). *Women, Fire, and Dangerous Things: What categories reveal about the mind*. Chicago, IL: Chicago University Press.

- Lakoff, G & Johnson, M. (1999). *Philosophy in the Flesh: The embodied mind and its challenge to western thought*. New York: Basic Books.
- Levinson, S., Meria, S., & The Language and Cognition Group. (2003). Natural Concepts in the Spatial Topological Domain – Adpositional meanings in crosslinguistic perspective: an exercise in semantic typology. *Language*, 79, 3, pp. 485-516.
- Lindstromberg, S. (1997). *English prepositions explained*. Amsterdam: John Benjamins Publishing Company.
- Munro, P. (1997). The Garifuna Gender System. In J.H Hill, P.J. Misty, and L. Campbell (Eds) *Trends in Linguistic Studies and Monographs: The life of Language-Papers in linguistics in honor of William Bright*. Berlin: Walter and Greater & Co.
- Munro, P. (1998). *Oblique subjects in Garifuna*. Ms.
- Piaget, J. & Inhelder, B. (1956). *The child's conception of space*. (F.J. Langdon & J.L Lunzer, Trans.). London: Routledge & Paul
- Svorou, Soteria. (1994). *The Grammar of Space*. (Typological Studies in Language 25). Amsterdam: John Benjamins Publishing Company.
- Svorou, S. (2002). Semantic constraints in the grammaticalization of locative constructions. In I. Wischer and G. Diewald (eds.) *New Reflections on Grammaticalization*. Amsterdam: John Benjamins Publishing Company.
- Talmy, L. (1983). How language structures space. In H.L. Pick and L.P. Acredolo (Eds.) *Spatial Orientation: Theory, Research and Application*. New York: Plenum Press.

- Talmy, L. (1988). The relation of grammar to cognition. In B Rudzka-Ostyn (Ed.) *Topics in cognitive linguistics*. Amsterdam: John Benjamins Publishing Company.
- Taylor, D. (1951). Morphophonemics of Island-Carib (Central American dialect). *International Journal of American Linguistics*, 17, pp. 224-234.
- Taylor, D. (1956a). Island Carib II: word-classes, affixes, nouns, and verbs. *International Journal of American Linguistics*, 22, pp. 1-44.
- Taylor, D. (1956b). Island-Carib Morphology III: Locators and Participles. *International Journal of American Linguistics*, 22, pp. 138-150.
- Taylor, D. (1977). *Languages of the West Indies*. Baltimore and London: Johns Hopkins University Press.
- Tyler, A. & Evans, V. (2001). Reconsidering prepositional polysemy networks: The case of *over*. *Language*, 77, 4 pp. 724-765.
- Vandeloise, C. (1991). *Spatial Prepositions*. (A.R.K.Bosch, Trans). Chicago, IL: University of Chicago Press.
- Vandeloise, C. (1994). Methodology and analyses of the preposition *in*. *Cognitive Linguistics*, 5-2, pp.157-184.

Appendix A

Approval letter from Human Subjects-Institutional Review Board

San José State
UNIVERSITY

**Office of the Academic
Vice President**
*Academic Vice President
Graduate Studies and Research*

One Washington Square
San Jose, CA 95192-0025
Voice: 408-283-7500
Fax: 408-924-2477
E-mail: gradstudies@sjsu.edu
<http://www.sjsu.edu>

To: Elaine Drom
3166 Impala Dr., #3
San Jose, CA 95117

From: Pam Stacks,
Interim AVP, Graduate Studies & Research

Date: March 1, 2004

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

“A Semantic Sketch of Spatial Grams in Garifuna.”

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Pam Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subjects portion of your project is in effect for one year, and data collection beyond March 1, 2005 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

cc: Dr. Roula Svorou

The California State University:
Chancellor's Office
Sacramento, Chico, Stanislaus, Fresno,
Bakersfield, Merced, Monterey, Fresno,
Hayward, Humboldt, Long Beach,
Los Angeles, Maritime Academy,
Maritime Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San Jose, San Luis Obispo,
San Marcos, Sonoma, Stanislaus

Appendix B

Comparison of Garifuna Standard Orthography and IPA adapted from Cayetano (1993)																		
Consonants																		
Orthography	b	ch	d	f	g	h	k	l	m	n	ñ	n	p	r	s	t	w	y
IPA	b	tʃ	d	f	g	h	k	l	m	n	ɲ	ɳ	p	r	s	t	w	j
Vowels																		
Orthography	i		e		a		o		u		ü							
IPA	i		e		a		o		u		ʊ							
Note: Nasalization is marked by an ‘n’ following the nasalized vowel																		

Appendix C

Abbreviations: Adapted from Taylor(1956a) and Ekulona (2000)

att = attributive
 aux = auxiliary
 def = definite
 f = feminine
 imp = imperative
 indef = indefinite
 m = masculine
 past = past tense
 perf = perfective
 priv = privative
 prog = progressive
 pro = independent pronoun
 p = plural
 ref = reflexive
 s = singular
 / = or

Pronominal agreement series from Ekulona (2000)

Symbol	series	1s	2s	3fs	3ms	1p	2p	3p
P	prefix	n-	b-	t-	l-	wa-	h-	ha-
D	di suffix	-dina	-dibu	-ru	-li	-diwa	-düü	-yan
S	short suffix	-na	-bu	-u	-i	-wa	-üü	-yan
R	reduced di suffix	-dina	-dibu	-u	-i	-diwa	-düü	-yan
T	ti suffix	-tina	-tibu	-tu	-ti	-tiwa	-tüü	-tiyan
N	ni suffix	-nina	-nibu	-nu	-ni	-niwa	-nüü	-niyan
I	infix	-na-	-bu-	-nu-	-ni-	-wa-	-nü-	-ya-

Note: Infix markers are always nasalized

Appendix D

Transcription of data from TRPS

Picture 1

Speaker 1 *i-ni-ha* *kopu* *l-uma* *asiedu l-uwagu* *dábula*
 exist-I3ms-exist cup P3ms-with plate P3ms-UWAGU table
 'The cup and saucer is on the table.'

Speaker 2 *i-ni-he* *kopu* *l-uwagu* *dábula*
 exist-I3ms-exist cup P3ms-UWAGU table
 'The cup is on the table.'

Picture 2

Speaker 1 *i-ni-ha* *furuda l-ida* *l-agei*
 exist-I3ms-exist fruit P3ms-IDA P3ms-container
 'The fruit is in its container.'

Speaker 2 *i-nu-he* *mansana* *l-ida* *bolu*
 exist-I3fs-exist apple P3ms-IDA bowl
 'The apple is in the bowl.'

Picture 3

Speaker 1 *u-ha-ru* *stampu t-uwagu* *gárada*
 put-perf-D3fs stamp P3fs-UWAGU letter
 'She already put the stamp on the letter.'

Speaker 2 *i-nu-he* *stampu t-uwagu* *gárada*
 exist-I3fs-exist stamp P3fs-UWAGU letter
 'There is a stamp on the letter.'

Picture 4

Speaker 1 *i-ni-he* *riba* *l-uwagu* *sanudelu*
 exist-I3ms-exist ribbon P3ms-UWAGU candle
 'There is a ribbon around the candle.'

Speaker 2 *i-ni-he* *aba t-adibiri* *sanudelu* *gura-yu l-uwagu* *sanudelu*
 exist-I3ms-exist one P3fs-toy candle tie-YU P3ms-UWAGU candle
 'There is a bow tied on the candle.'

Speaker 2 *i-ni-he* *aba* *bou* *gura-yu* *l-uwagu* *sanudelu*
 exist-I3ms-exist one bow tie-YU P3ms-UWAGU candle
 'There is a bow tied on the candle.'

Picture 5

Speaker 1 *ga-bunidi-ti*
att-hat-T3ms
'He wears a hat' Lit: He is hatted

Picture 5

Speaker 1 *ga-bunidi-ti l-uwagu l-ichugu*
att-hat-T3ms P3ms-UWAGU P3ms-head
'He wears a hat on his head.'

Speaker 2 *i-ni-he bunidi l-uwagu l-ábulugu mutu*
exist-I3ms-exist hat P3ms-UWAGU P3ms-head person
'The hat is on the person's head.'

Picture 6

Speaker 1 *yul-ia ounli bogudi t-un l-uba*
sit-prog dog outside P3fs-un P3ms-house
'The dog is sitting outside his house.'

Speaker 2 *i-ni-he ounli t-óba-gien l-uba*
exist-I3ms-exist dog P3fs-side-GIEN P3ms-house
'The dog is by his house.'

Picture 7

Speaker 1 *i-nu-ha ineü l-uwagu t-isielu muna*
exist-I3fs-exist pest P3ms-UWAGU P3fs-ceiling house
'There is a pest on the ceiling (of the house).'

Speaker 2 *i-ni-he anasi t-ábulugu muna*
exist-I3ms-exist spider P3fs-head house
'There is a spider on the roof of the house.'

Speaker 2 *i-ni-he anasi iyu*
exist-I3ms-exist spider high
'There is a spider up high.'

Picture 8

Speaker 1 *i-nu-ha gárada l-uwagu shelfu*
exist-I3fs-exist book P3ms-UWAGU shelf
'There is a book on the shelf.'

Speaker 2 *i-nu-he* *gárada t-uwagu* *shelf*
 exist-I3fs-exist book P3fs-UWAGU shelf
 'The book is on the shelf.'

Picture 9

Speaker 1 *dahiu-tian* *abí* *l-uwagu* *t-adahi-gule*
 hang-T3p coat P3ms-UWAGU 'thing for hanging'
 'They hung the coat on the coat rack.'

Speaker 2 *i-nu-he* *abi* *l-uwagu* *t-arugule* *abi*
 exist-I3fs-existcoat P3ms-UWAGU P3fs-holder coat
 'The coat is on the coat holder.'

Picture 10

Speaker 1 *ga-baga-tu* *l-uwagu* *tu-fingaru*
 att-ring-T3fs P3ms-UWAGU P3fs-finger
 'She's wearing a ring on her finger.'

Speaker 2 *i-ni-he* *bagu* *l-uwagu* *ifingaru*
 exist-I3ms-exist ring P3ms-UWAGU finger
 'There is a ring on a finger.'

Picture 11

Speaker 1 *i-nu-ha* *guiera duna-rugu*
 exist-I3ms-exist boat water-RUGU
 'There is a boat on the water.'

Speaker 2 *i-nu-he* *aba* *guyiera* *l-ida* *barana*
 exist-I3fs-exist one boat P3ms-IDA sea
 'The boat is in the sea.'

Speaker 2 *i-nu-he* *aba* *guyiera* *l-uwagu* *barana*
 exist-I3fs-exist one boat P3ms-UWAGU sea
 'The boat is on the sea.'

Speaker 2 *i-nu-he* *aba* *guyiera* *barana-rugu*
 exist-I3fs-exist one boat sea-RUGU
 'The boat is in the sea.'

Picture 12

Speaker 1 *i-ni-he* *iwie* *t-uwagu* *gusiyu*
 exist-I3ms-exist dirt P3fs-UWAGU knife
 'There is dirt on the knife.'

Speaker 2 *i-ni-he* *ifei* *t-uwagu* *gusiya*
 exist-I3ms-exist dirt P3fs-UWAGU knife
 'There is dirt on the knife.'

Picture 13

Speaker 1 *dibiyul-ian* *lampu* *iyu-gien*
 hang-prog lamp high-GIEN
 'The lamp hangs from above.'

Speaker 1 *i-ni-he* *l-adibi-gule* *lampu* *l-ida* *t-isielu* *muna*
 exist-I3ms-exist P3ms-hang-nom lamp P3ms-IDA P3fs-ceiling house
 'The cord for the lamp is in the ceiling.'

Speaker 2 *i-ni-hen* *l-áragule* *lampu* *iyu*
 exist-I3ms-exist P3ms-holder lamp high
 'The lamp holder is at the top.'

Picture 14

Speaker 1 *i-nu-houn* *gafu* *t-ida* *tu-posu*
 exist-P3fs-exist box P3fs-IDA P3fs-purse
 'There is a box in her purse.'

Speaker 2 *i-ni-he* *katei* *t-uragei-rugu* *posu*
 exist-I3ms-exist something P3fs-belly-RUGU purse
 'There is something inside the purse.'

Picture 15

Speaker 1 *barieru-tu* *muna*
 fence-T3fs house
 'The fence surrounds the house.' Lit: The house is fenced

Speaker 1 *a-ni-he* *barieru t-au* *muna*
 exist-I3ms-exist fence P3fs-ÁU house
 'The fence surrounds the house.'

Speaker 2 *i-nu-he* *aba* *muna* *l-áu* *barieru t-áu*
 exist-I3fs-exist one house P3ms-ÁU fence P3fs-ÁU
 'There is a house with a fence around it.'

Speaker 2 *i-ni-he* *barieru* *t-áu* *muna*
 exist-I3ms-exist fence P3fs-ÁU house
 'The fence is around the house.'

Picture 16

Speaker 1 *i-ni-he* *balü* *l-abu-gian* *haloü*
 exist-P3ms-exist ball P3ms-behind-GIEN chair
 'The ball is under the chair.'

Speaker 2 *i-ni-he* *balü* *l-ábu-gien* *haloü*
 exist-I3ms-exist ball P3ms-behind-GIEN chair
 'There is a ball under the chair.'

Picture 17

Speaker 1 *i-ni-he* *idibu* *l-óba-wagu* *ubu*
 exist-I3ms-exist tree P3ms-side-UWAGU mountain
 'There is a tree on the side of the mountain.'

Speaker 2 *i-nu-he* *aba* *ídibu* *l-uwagu* *ubu*
 exist-I3fs-exist one tree P3ms-UWAGU hill
 'There's a tree on the hill.'

Picture 18

Speaker 1 *ga-huyu-tu* *tuwaya*
 att-hole-T3fs towel
 'There is a hole in the towel.'

Speaker 2 *i-ni-he* *aba* *huju* *t-uwagu* *abu towaya* *tó*
 exist-I3ms-exist one hole P3fs-UWAGU behind towel this.f
t-uwagu *bei* *lein*
 P3fs-UWAGU BA.S/R3ms line
 'There is a hole in the towel that is on the line.'

Picture 19

Speaker 1 *i-nu-houn* *manzana* *l-uwagu* *asiedu*
 exist-I3fs-exist apple P3ms-UWAGU plate
 'There is an apple on the plate.'

Speaker 2 *i-ni-he* *aba* *mansana* *l-ida* *asiedu*
 exist-I3ms-exist one apple P3ms-IDA plate
 'There is an apple in the plate.'

Picture 20

Speaker 1 *i-nu-ha* *buloda* *l-uwagu* *l-ebu* *wewe*
 exist-I3fs-exist balloon P3ms-UWAGU P3ms-tip stick
 'There is a balloon at the tip of the stick.'

Speaker 2 *i-nu-he* *aba* *bloda* *l-uwagu* *weiwei*
 exist-I3fs-exist one balloon P3ms-UWAGU stick
 'There is a balloon on the stick.'

Picture 21

Speaker 1 *ga-sabadu* *l-uwagu* *t-ugudi*
 att-shoe P3ms-UWAGU P3fs-foot
 'She has a shoe on her foot.'

Speaker 2 *i-nu-he* *aba* *sábadu* *l-uwagu* *t-ugudi* *aba* *mutu*
 exist-I3fs-exist one shoe P3ms-UWAGU P3fs-foot one person
 'There is a shoe on a lady's foot.'

Picture 22

Speaker 1 *dawa-ru* *garada* *l-uwagu* *t-ebule* *larma yu-bei*
 hang-D3fs paper P3ms-UWAGU 'holder that stands up'
 'She stuck papers on the holder that stands up.'

Speaker 2 *i-nu-hen* *úruwa* *musu* *gárada* *l-uwagu*
 exist-I3fs-exist three piece paper P3ms-UWAGU
t-aragule *gárada*
 P3fs-holder paper
 'There are 3 pieces of paper on a paper holder.'

Picture 23

Speaker 1 *i-ni-he* *hozu* *l-igibu-wógu* *blagu*
 exist-I3ms-exist hose P3ms-face-UWAGU block
 'There's a hose on top of the block (stump).'

Speaker 2 *i-ni-he* *aba* *hosu* *l-uwagu* *titompu* *aba* *idibu*
 exist-I3ms-exist aba hose P3ms-UWAGU stump one tree
 'There is a hose on a tree stump.'

Picture 24

Speaker 1 *i-ni-he* *gulieru* *t-ábu-gien* *garada* *tó* *l-araga-gule*
 exist-I3ms-exist spoon P3fs-behind-GIEN paper this P3ms-wipe-nom
b-iuma *danle* *begi*
 P2s-mouth when food
 'The spoon is underneath the napkin (paper used for wiping your mouth).'

Speaker 2 *i-ni-he* *aba* *gulieru* *wiye-ti* *t-ábu-gien*
 exist-I3ms-exist one spoon dirty-T3ms P3fs-behind-GIEN
peipa napkin
 paper napkin
 'There's a dirty spoon under a paper napkin.'

Picture 25

Speaker 1 *dahiyul-ian* *gagamuru*
 hang-prog phone
 'The phone is hanging.'

Speaker 1 *dahiyul-ian* *gagamuru* *l-uwagu* *t-oba*
 hang-prog phone P3ms-UWAGU P3fs-side
 'The phone is hanging on the side.'

Picture 25

Speaker 1 *dahiyul-ian* *gagamuru* *t-óba-wagu* *muna*
 hang-prog phone P3fs-side-UWAGU house
 'The phone is hangin on the wall (side of the house).'

Speaker 2 *i-ni-he* *aba* *gagamuru* *l-uwagu*
 exist-I3ms-exist one telephone P3ms-UWAGU
t-óba-wagu *muna*
 P3fs-side-UWAGU house
 'There's a telephone on the side of the house.'

Picture 26

Speaker 1 *foungha-li* *kopu* *l-óba-wagu*
 crack-D3ms cup P3ms-side-UWAGU
 'The cup is cracked on the side.'

Speaker 2 *i-ni-he* *aba* *krak* *l-uwagu* *kopu*
 exist-I3ms-exist one crack P3ms-UWAGU cup
 'There is a crack on the cup.'

Picture 27

Speaker 1 *dibiyul-ia* *furuda* *tu-wéi-gian* *idibu*
 hang-prog fruit P3fs-WÉI-GIEN tree
 'The fruit is hanging from the tree.'

Speaker 2 *i-nu-he* *aba* *furuda* *t-uwagu* *idibu*
 exist-I3ms-exist one fruit P3fs-UWAGU tree
 'There is a fruit on the tree.'

Picture 28

Speaker 1 *i-nu-ha* *tiawa hinyaru* *l-ida*
 exist-I3fs-exist picture woman P3ms-IDA
tuwende dugule tadahiru
 dressing for hanging pictures
 'There is a picture of a woman in a frame (dressing for hanging pictures).'

Speaker 2 *i-nu-he* *aba tiawa* *aba mutu t-uwagu* *stampu*
 exist-I3fs-exist one picture one person P3fs-UWAGU stamp
 'There is a picture of a person on the stamp.'

Speaker 2 *i-ni-he* *aba ábulugu* *t-uwagu* *stampu*
 exist-I3ms-exist one head P3fs-UWAGU stamp
 'There is a head on the stamp.'

Picture 29

Speaker 1 *ga-dou-ti* *dábula*
 att-cover-T3ms table
 'There is a covering over the table.'

Speaker 2 *i-nu-he* *aba saruédu* *l-uwagu* *dábula*
 exist-I3fs-existone table-covering P3ms-UWAGU table
 'There is a table cloth on the table.'

Picture 30

Speaker 1 *i-ni-he* *aba wewe hamana-ti* *siguha* *t-ida-gian*
 exist-I3ms-exist one stick sharp-T3ms SIGUHA P3fs-IDA-GIEN
manzana
 apple
 'There is a sharp stick that has gone through the apple.'

Speaker 2 *i-ni-he* *aba daga t-ida-gien* *mansana*
 exist-I3ms-exist one spear P3fs-IDA-GIEN apple
 'There is a spear through the apple.'

Speaker 2 *i-ni-he* *aba daga t-ida* *mansana*
 exist-I3ms-exist one spear P3fs-IDA apple
 'There is a spear in the apple.'

Picture 31

Speaker 1 *i-ni-he* *mesu l-ábu-gian* *dábula*
 exist-I3ms-exist cat P3ms-behind-GIEN table
 'There is a cat under the table.'

Speaker 2 *i-ni-he* *aba* *mesu* *l-ábu-gien* *dábula*
 exist-I3ms-exist one cat P3ms-behind-GIEN table
 'There is a cat under the table.'

Picture 32

Speaker 1 *i-ni-ha* *üdero* *l-ida* *fudu* *le* *weru*
 exist-I3ms-exist fish P3ms-IDA jug this glass
l-egagana-ti *duna*
 P3ms-contains-T3ms water
 'The fish is in the glass jug that contains water.'

Speaker 2 *i-ni-he* *aba* *üdero* *l-ida* *bolu*
 exist-I3ms-exist one fish P3ms-IDA bowl
 'There is a fish in the bowl.'

Picture 33

Speaker 1 *i-ni-ha* *pini* *le* *t-adahi-gule*
 exist-I3ms-exist pin this P3fs-ADAHl-nom
gamisa *l-uwagu* *lein*
 shirt P3ms-UWAGU line
 'The pin for putting out clothes is on the line.'

Speaker 2 *i-ni-he* *aba* *klospin* *l-uwagu* *lein*
 exist-I3ms-exist one clothespin P3ms-UWAGU line
 'There is a clothes pin on the line.'

Picture 34

Speaker 1 *l-arama* *girigia le* *l-uwagu* *l-eriedi* *t-abulugu muna*
 P3ms-stand person this P3ms-UWAGU P3ms-edge P3fs-head house
 'This person is standing on the edge of the roof.'

Speaker 2 *i-ni-he* *aba* *gurigea* *t-ábulugu* *muna*
 exist-I3ms-exist one person P3fs-head house
 'There is a man on top of the house.'

Picture 35

Speaker 1 *l-áu-gian* *l-umurugute*
 P3ms-ÁU-GIEN P3ms-ankle
 'It [the bandage] is above his ankle.'

Speaker 2 *i-ni-he* *aba* *bandedu* *l-uwagu* *ugudi*
 exist-I3ms-exist one band aid P3ms-UWAGU foot
 'There is a Band-Aid on a foot.'

Speaker 2 *i-ni-he* *aba* *aguru-gule* *l-uwagu* *aba* *ugudi*
 exist-I3ms-exist one tie-nom P3ms-UWAGU one foot
 'There is a tie on a foot.'

Picture 36

Speaker 1 *yul-ia* *durari* *l-áu-gian* *ubu*
 sit-prog cloud P3ms-ÁU-GIEN mountain
 'The cloud is sitting above the mountain.'

Speaker 2 *i-ni-he* *aba* *klaudu* *l-áu-gien* *ubu*
 exist-I3ms-exist one cloud P3ms-ÁU-GIEN mountain
 'There is a cloud over the mountain.'

Picture 37

Speaker 1 *dahiwa* *gamisa* *l-uwagu* *lein*
 DAHIWA cloth/shirt P3ms-UWAGU line
 'The clothes have been hung on the line.'

Speaker 2 *i-ni-he* *anagunei* *l-uwagu* *lein*
 exist-I3ms-exist clothes P3ms-UWAGU line
 'There are clothes on the line.'

Picture 38

Speaker 1 *yu-l-ian* *iyeri* *le* *mua-rugu* *l-óba-wagu* *watu*
 sit-D3ms-prog pro.ms this.ms ground-RUGU P3ms-side-UWAGU fire
 'This guy is sitting on the ground next to the fire.'

Speaker 2 *i-ni-he* *aba* *gurigea* *yul-ia* *l-óba-wagu* *watu*
 exist-I3ms-exist one person sit-prog P3ms-side-UWAGU fire
 'There is a man sitting beside the fire.'

Picture 39

Speaker 1 *i-ni-ha* *sigaru* *l-iumu-lugu* *l-agumuluhe-in*
 exist-I3ms-exist cigarette P3ms-mouth-RUGU P3ms-smoke-IN
 'There is a cigarette in his mouth and he is smoking.'

Speaker 1 *i-ni-ha* *sigaru* *l-iumu-lugu* *iyeri le l-agumalahe-in*
 exist-I3ms-exist cigarette pro.ms this.ms P3ms-smoke-IN
 'There is a cigarette in this guy's mouth and he is smoking.'

Speaker 2 *i-ni-he* *aba sigaru* *l-iumu-lugu* *aba* *mutu*
 exist-I3ms-exist one cigarette P3ms-mouth-RUGU one person
 ‘There is a cigarette in someone’s mouth.’

Picture 40

Speaker 1 *yu-ru-l-ian* *mesu* *t-uwagu* *rogu*
 sit-D3fs-L-prog cat P3fs-ON_G rug
 ‘The cat is sitting on the rug.’

Speaker 2 *i-ni-he* *aba* *mesu* *t-uwagu* *nadi*
 exist-I3ms-exist one cat P3fs-UWAGU mat
 ‘There is a cat on the mat.’

Picture 41

Speaker 1 *i-ni-ha* *ubanoü* *l-uwagu* *liu* *agei* *ebu* *tu-idubu*
 exist-I3ms-exist leaf P3ms-ON_G high AGEI top
 P3ms-tree
 ‘The leaf is at the top of the highest point of the branch of the tree.’

Speaker 2 *i-ni-he* *aba* *ubanoü* *t-uwagu* *ididbu*
 exist-I3ms-exist one leaf P3fs-UWAGU tree
 ‘There’s a leaf on the tree.’

Picture 42

Speaker 1 *i-ni-he* *beltu* *l-uwagu* *t-ibiri*
 exist-I3ms-exist belt P3ms-UWAGU P3fs-waist
 ‘The belt is around her waist.’

Speaker 2 *i-ni-he* *aba* *beltu* *l-uwagu* *t-ibiri*
 exist-I3ms-exist one belt P3ms-UWAGU P3fs-waist
 ‘There is a belt on her waist.’

Picture 43

Speaker 1 *degeguwa* *hozu* *mua-rugu-gian* *l-uwagu* *l-igibu*
 straddle hose ground-RUGU-GIEN P3ms-UWAGU P3ms-tree
blagu *deyaladagaru* *l-uwagu* *leyaba* *oba*
 block DEYALADAGARU P3ms- UWAGU LEYABA side
 ‘The hose is spread from the ground across to the top of the stump and then back to the ground on the other side’

Speaker 2 *i-ni-he* *aba* *hozu* *l-uwagu* *titompu* *idibu*
 exist-I3ms-exist aba hose P3ms-UWAGU stump tree
 ‘There is a hose on the tree stump.’

Picture 44

Speaker 1 *dahiut-ian* *iyawoü* *t-óba-wagu* *muna*
 hang-prog picture P3fs-side-UWAGU house
 ‘The picture is hanging against the side of the house.’

Speaker 2 *i-nu-he* *aba* *pikcha* *l-uwagu* *t-oba* *muna*
 exist-I3fs-exist one picture P3ms-UWAGU P3fs-side house
 ‘There is a picture on the wall.’

Picture 45

Speaker 1 *gi-tu* *idibu* *gibe-ti* *furudu t-uwagu*
 GI-T3fs tree many-T3ms fruit P3fs-UWAGU
 ‘The tree blossomed well, there is a lot of fruit on it.’

Speaker 2 *i-ni-he bandi arasu l-uwagu t-ídibu*
 exist-I3ms-exist many orange P3ms-UWAGU P3fs-tree
 ‘There are many oranges on the orange tree.’

Picture 46

Speaker 1 *ga-musujete-tu gun* *ta* *l-au* *t-erebe* *l-ubaku*
 att-scarf-T3fs GUN TA P3ms-au P3fs-forehead P3ms-UBAKU
 ‘She's wearing a scarf/bandana, its tied across her forehead.’

Speaker 2 *i-ni-he* *aba* *mutu* *gura-yu* *l-ichugu*
 exist-I3ms-exist one person tie-YU P3ms-head
halia yungi *gamisa l-uwagu* *l-erebe*
 where YUNGI cloth P3ms-UWAGU P3ms-forehead
 ‘The cloth is tied on his forehead.’

Picture 47

Speaker 1 *yu-ru-ha* *ounli* *t-uwagu* *li-gabana*
 sit-D3fs-perf dog P3fs-UWAGU P3ms-bed
 ‘The dog sits on his bed.’

Speaker 2 *yun-ha* *aba* *ounli* *t-ida* *li-gabana*
 sit-perf one dog P3fs-IDA P3ms-bed
 ‘The dog is sitting in his bed.’

Picture 48

Speaker 1 *ahibuha-li* *huya* *l-uwagu* *funedera*
 sprinkle-D3ms rain P3ms-UWAGU window
 ‘There are rain drops on the window. (Lit: It sprinkled lightly on the window)’

Speaker 2 *i-ni-he* *laeguwa-rugu* *huya* *l-uwagu* *funedera*
 exist-I3ms-exist LAEGUWA-RUGU rain P3ms-UWAGU window
 ‘There are bits of rain on the window.’

Speaker 2 *i-ni-he* *l-ari-gien* *huya* *l-uwagu* *funedera*
 exist-I3ms-exist P3ms-navel??-GIEN rain P3ms-UWAGU window
 ‘There are bits of rain on the window.’

Picture 49

Speaker 1 *ga-bana-tu* *idibu*
 att-leaf-T3fs tree
 ‘The tree has leaves/there are leaves in the tree.’

Speaker 2 *i-ni-he* *ubanoü* *t-ábulugu* *ligilisi*
 exist-I3ms-exist leaf P3fs-head church
 ‘There are leaves on the top of the church.’

Picture 50

Speaker 1 *uruwa ye* *ebu* *l-uwagu* *t-oba* *muna*
 three YE hook P3ms-UWAGU P3fs-side house
 ‘There are three hooks on the wall (side of the house).’

Speaker 2 *i-ni-he* *úruwa hoku* *t-óba-wagu* *muna*
 exist-I3ms-exist three hook P3fs-side-UWAGU house
 ‘There are three hooks on the side of the house.’

Picture 51

Speaker 1 *ga-yari-tu* *l-áu* *t-igina*
 att-necklace-T3fs P3ms-ÁU P3fs-neck
 ‘She has a necklace around her neck.’

Speaker 2 *i-ni-he* *aba* *giria* *l-áu* *t-iari*
 exist-I3ms-exist one GIRIA P3ms-ÁU P3fs-IARI
irufugu-tu
 beautiful-T3fs
 ‘There is a person with a necklace, she is beautiful.’

Picture 52

Speaker 1 *uruwa-yano* *hawiyeri* *ienouü* *t-óba-wagu* *muna*
 three-YANO HAWIYERI pest P3fs-side-UWAGU house
 ‘There are three types of yuck/pests on the side of the house (wall).’

Speaker 2 *i-ni-he* *úruwa katei* *t-óba-wagu* *muna*
 exist-I3ms-exist three something P3fs-side-UWAGU house
 ‘There are three things on the side of the house.’

Picture 53

Speaker 1 *i-ni-he* *aba katei* *macha-li* *l-abu-gian*
 exist-I3ms-exist one something MACHA-D3ms P3ms-behind-GIEN
dábula
 table
 ‘There is something stuck underneath the table.’

Speaker 2 *i-ni-he* *aba katei* *l-ábu-gien* *dábula*
 exist-I3ms-exist one something P3ms-behind-GIEN table
 ‘There is something under the table.’

Picture 54

Speaker 1 *I-ni-ha* *masaraga* *l-ida* *l-agei*
 exist-I3ms-exist rabbit P3ms-IDA P3ms-case
 ‘The rabbit is in its case
le arederubane lu-wéi leibagu
 that stops it from getting away.’

Speaker 2 *i-ni-he* *aba* *másaraga* *t-ida* *l-uba*
 exist-I3ms-exist one rabbit P3fs-IDA P3ms-house
 ‘There is a rabbit in his house.’

Picture 55

Speaker 1 *gunguwa* *yu-lian* *hozu* *l-áu* *t-ugudinaü* *blagu*
 GUNGUWA sit-prog hose P3ms-ÁU P3fs-base block
 ‘The hose is wrapped around the foot of the tree block (stump).’

Speaker 2 *i-ni-he* *aba hozu* *gura-wa* *t-áu* *titompu* *ídibu*
 exist-I3ms-exist one hose tie-WA P3fs-ÁU stump tree
 ‘There is a hose tied around the stump.’

Speaker 2 *gura-wa hozu l-uwagu titompu ídibu*
 tie-WA hose P3ms-UWAGU stump tree
 ‘The hose is tied on the stump.’

Picture 56

Speaker 1 *i-ni-he* *fanidira* *l-igibu-gian* *bururu iyu-ti* *l-áhamaha*
 exist-I3ms-exist flag P3ms-face-GIEN yard high-T3ms P3ms-fly
 ‘The flag is in the front of the yard it flies high.’

Speaker 2 *i-ni-he* *aba* *fanidira* *l-uwagu* *polu*
 exist-I3ms-exist one flag P3ms-UWAGU pole
 ‘The flag is on the pole.’

Picture 57

Speaker 1 *ga-dibi-ti* *inyari*
 att-pendant-T3ms necklace
 ‘There is a pendant hanging on the necklace.’

Speaker 2 *i-ni-he* *aba* *l-adibiri* *iyari* *l-uwagu* *iyari*
 exist-I3ms-exist one P3ms-toy chain P3ms-UWAGU chain
 ‘There is a pendant on the chain.’

Speaker 2 *i-ni-he* *aba katei* *adibina-ti* *lu-wéi-gien* *iyari*
 exist-I3ms-exist one something ADIBINA-T3ms P3ms-WÉI-GIEN chain
 ‘There is something hanging from the chain.’

Picture 58

Speaker 1 *i-ni-ha* *kelera* *t-óba-wagu* *muna*
 exist-I3ms-exist ladder P3fs-side-UWAGU house
 ‘The ladder is on the side of the house.’

Speaker 2 *i-ni-he* *aba* *kalera* *t-óba-wagu* *muna*
 exist-I3ms-exist one ladder P3fs-side-UWAGU house
 ‘There is a ladder on the wall.’

Picture 59

Speaker 1 *i-ni-ha* *peni* *l-uwagu* *dábula lanina burugule*
 exist-I3ms-exist pen P3ms-UWAGU table ‘for writing’
 ‘The pen is on the table for writing (desk).’

Speaker 2 *i-ni-he* *aba* *aburu-gule* *l-uwagu* *dábula*
 exist-I3ms-exist one write-nom P3ms-UWAGU table
 ‘There is a writing utensil on the table.’

Picture 60

Speaker 1 *i-nu-ha* *muna* *la-mida* *bururu*
 exist-I3fs-exist house P3ms-MIDA yard
 ‘The house is in the middle of the yard.’

Speaker 2 *i-ni-he* *aba* *muna* *l-áu* *barieru* *t-áu*
 exist-I3ms-exist one house P3ms-ÁU fence P3fs-ÁU
 ‘There is a house with a fence around it.’

Speaker 2 *i-nu-he* *l-ida* *barieru*
 exist-I3fs-exist P3ms-IDA fence
 ‘It [the house] is within the fence.’

Speaker 2 *i-nu-he* *la-mida* *barieru*
 exist-I3fs-exist P3ms-MIDA fence
 ‘It [the house] is in the middle of the fence.’

Picture 61

Speaker 1 *g-ebu-ti* *bena*
 att-handle-T3ms door
 ‘There’s a handle on the door.’

Speaker 2 *i-ni-he* *aba* *l-aragule* *bena* *l-uwagu* *bena*
 exist-I3ms-exist one P3ms-handle door P3ms-UWAGU door
 ‘There is a door handle on the door.’

Picture 62

Speaker 1 *ga-kaki-ti* *budein*
 att-cork-T3ms bottle
 ‘There’s cork in the bottle.’

Speaker 2 *i-ni-he* *aba* *kaku* *l-uwagu* *budein*
 exist-I3ms-exist one cork P3ms-UWAGU bottle
 ‘There is a cork on the bottle.’

Picture 63

Speaker 1 *dibiyu-l-ia* *lampu* *lu-wéi-gian* *t-isielu* *muna*
 hang-D3ms-prog lamp P3ms-WÉI-GIEN P3fs-ceiling house
 ‘The lamp is hanging from the ceiling.’

Speaker 2 *i-ni-he* *aba* *lampu* *iyu-gien* *lasali*
 exist-I3ms-exist one lamp high-GIEN livingroom
 ‘There is a lamp from above in the living room.’

Picture 64

Speaker 1 *l-aramuda-gu-yon* *t-amule* *l-anaga-gian* *haloü*
 P3ms-hide-GU-prog P3fs-brother P3ms-back-GIEN chair
 ‘Her brother is hiding behind the chair.’

Speaker 2 *i-ni-he* *aba* *gurigea* *aramuluguguti* *l-anaga-gien* *haloü*
 exist-I3ms-exist one person ‘hiding’ P3ms-back-GIEN chair
 ‘There is a man hiding behind the chair.’

Picture 65

Speaker 1 *i-nu-ha* *idibu* *l-uwagu* *liu* *agei* *l-un*
 exist-I3fs-exist tree P3ms-UWAGU high container P3ms-un
ubu
 mountain
 ‘The tree is at the highest point of the mountain.’

Speaker 2 *i-ni-he* *aba* *idibu* *l-uwagu* *ubu*
 exist-I3ms-exist one tree P3ms-UWAGU hill
 ‘There is a tree on the hill.’

Picture 66

Speaker 1 *dibiha* *t-arüna* *posu* *l-uwagu* *t-oba*
 DIBIHA P3fs-arm purse P3ms-UWAGU P3fs-side
 ‘The straps of the purse are hanging on each side.’

Speaker 2 *i-ni-he* *agurugule* *l-uwagu* *posu*
 exist-I3ms-exist strap P3ms-UWAGU purse
 ‘There’s a strap on the purse.’

Picture 67

Speaker 1 *i-ni-ha* *gaduri* *l-ida* *huya* *le* *t-ida*
 exist-I3ms-exist owl P3ms-IDA hole this.ms P3fs-IDA
bei *idibu*
 BA.S/R3ms tree
 ‘The owl is in the hole that is in the tree.’

Speaker 2 *i-ni-he* *aba* *gádiri* *t-ida* *idibu*
 exist-I3ms-exist one owl P3fs-IDA tree
 ‘There is an owl in the tree.’

Picture 68

Speaker 1 *i-ni-he* *aburuha-ni* *t-uwagu* *li-simisi*
 exist-I3ms-exist writeha-NI P3ms-UWAGU P3ms-shirt
UCLA-li
 UCLA-D3ms
 ‘There is writing on his shirt and it says UCLA.’

Speaker 2 *i-ni-he* *aba* *irahü* *t-áu* *aba* *simisi*
 exist-I3ms-exist one child P3fs-ÁU one shirt
l-áu *UCLA* *aburuduru-ti* *l-uwagu* *simisi*
 P3ms-ÁU UCLA written P3ms-UWAGU shirt
 ‘There is a boy with a shirt with UCLA written on the shirt.’

Picture 69

- Speaker 1 *ga-rigela-tu* *l-uwagu* *t-arigei*
att-earring-T3fs P3ms-UWAGU P3fs-ear
‘She’s wearing an earring in her ear.’
- Speaker 2 *i-nu-he* *aba* *arigeilaü* *l-uwagu* *aba* *arigei*
exist-I3fs-exist one earring P3ms-UWAGU one ear
‘There’s an earring on an ear.’

Picture 70

- Speaker 1 *ragula* *furuda* *l-uwagu* *aba* *wewe* *le* *ladarun*
RAGULA fruit P3ms-UWAGU one stick this.ms push-UN
sugu-lugu *t-ida-gien*
SUGU-RUGU P3ms-IDA-GIEN
‘He’s holding a fruit on a stick that he has pushed through the fruit.’
- Speaker 2 *i-ni-he* *aba mansana* *l-uwagu* *l-igeri* *wewe*
exist-I3ms-exist one apple P3ms-UWAGU P3ms-point stick
‘There apple is on the point of the stick.’

Picture 71

- Speaker 1 *yu-lian* *ounli* *t-ida* *l-uba* *l-abu-gian*
sit-prog dog P3fs-IDA P3ms-house P3ms-behind-GIEN
tu-bene-ri *l-uba*
P3fs-door-RI P3ms-house
‘The dog is sitting in his house under the doorway of the house.’
- Speaker 2 *i-ni-he* *ounli* *le-bene-ri*
exist-I3ms-exist dog P3ms-door-RI
‘There is a dog at the doorway.’

Appendix E

Key to Figures 2 and 3 and Appendices F, G, and H

Monomorphemic Prepositions:

-ida

-uwagu

-áu

-mida

Polymorphemic Prepositions: Preposition + Suffix:

-ídagien

-wéigien

-áugien

Relational Noun + Suffix:

-óbagien

-anagagien

-ábugien

-igibugien

-igibuógu

-óbawagu

turageirugu

Suffixes:

-rugu

-gien

Relational Nouns:

-ábulugu

Other:

bogudi

**NOTIONAL
CATEGORIES**

**Non-standard
spatial grams**

Spatial Notional Categories on Fixed Array – Adapted from Levinson et al. (2003)

	A	B	C	D	E	F	G	H	I	J
1
2	IN
3
4
5
6
7
8
9	OVER
	13	36			53	16	31	24	5	

Appendix G

Speaker 1: Fixed Array with Garifuna Grams Outlined

	A	B	C	D	E	F	G	H	I	J
1		14	54	39	22	46		04	0	38
2		2	67	30	70	69	58	7	17	42
3		2	54	30	20	51	44	21	15	42
4	71	32	19	60	57	9	10	42	50	15
5		62	11	47	37	63	33	48	12	4
6		1	40	8	18	68	3	61	35	55
7		23	65	59	27	41	52	66	35	55
8		34	43	29	19	28	20	29	5	55
9	13	36			53	16	31	24	5

Appendix H

Speaker 2: Fixed Array with Garifuna Grams Outlined

	A	B	C	D	E	F	G	H	I	J
1
2
3
4
5
6
7
8
9