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Creole Genesis and Universality: Case,  
Word Order, and Agreement

Gerald Taylor Snow

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of

Master of Arts

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## ABSTRACT

### Creole Genesis and Universality: Case, Word Order, and Agreement

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The genesis of creole languages is important to the field of linguistics for at least two reasons. As newly emerging languages, creoles provide a unique window on the human language faculty and on the development of language generally (Veenstra 2008). They also offer insight into what are arguably universal linguistic structures. Two opposing theories have been in contention in the literature with respect to creole genesis: (1) that creoles owe their origin to the lexifier and substrate languages of their speech community and to other environmental influences (McWhorter 1997); and alternatively, (2) that universal innate linguistic structures or principles are the generative source of creole grammar (Bickerton 1981). Both theories have a claim to at least partial correctness. This thesis adds new evidence in support of the universalist/innatist argument.

This thesis examines five written creole languages and two signed creole languages of geographic and historical diversity and focuses on the grammatical system of case, word order, and agreement of these languages as one axis along which to investigate the issue of creole genesis and universality. The signed languages in particular offer unique data, especially the data from Nicaraguan Sign Language, where there was an absence of significant lexifier and substrate influences. Patterns of what are termed core indispensable features in these seven language systems are uncovered, examined and compared. Further comparison is made with the case, word order, and agreement features of the world's languages generally and of creole languages as a subset of the world's languages, based on data in the World Atlas of Language Structures (Dryer & Haspelmath 2009) and in the Atlas of Pidgin and Creole Language Structures (Michaelis et al. 2013b), respectively.

The findings and contributions to the field made possible from the data in this thesis are that there are commonalities in the case, word order, and agreement systems of the subject creole languages that qualify as core indispensable features and that these features are generated by universal innate linguistic expectations. These commonalities are: (1) that morphological case inflection is not a core indispensable feature; (2) that SVO word order is a core indispensable feature; and (3) that agreement as a feature, seen only when word order is apparently verb final, occurs only in the signed creole languages and is more accurately interpreted as topicalization incorporated into SVO word order rather than as an independent core feature. Nicaraguan Sign Language presents especially compelling evidence for these conclusions.

Keywords: case, word order, agreement, creole genesis, universality, innatism, signed languages

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## Chapter 1 Introduction

### 1.1 The issue of creole genesis and universality

It is arguable that all languages have a case system of one kind or another. It would be more accurate, however, to say that all languages have a complementary combination of case, word order, and agreement (Siddiqi 2014).<sup>1</sup> The purpose of such combination of case, word order, and agreement is to answer the question ‘who did what to whom and when, where, how, etc.,’ or in other words, to identify the grammatical and semantic role of all the noun phrases (NPs) in a sentence (Melinger 2009).

This thesis will examine the emergence of case, word order, and agreement in five written creole languages and two signed creole languages. In particular, case, word order, and agreement will be considered as one axis along which to consider the issue of creole genesis and linguistic universality. It has been said in various ways that creoles provide a special, perhaps unique, window on the human language faculty (Veenstra 2008). Derek Bickerton (1981:42) made the following statement in his landmark book, Roots of Language:

...if all creoles could be shown to exhibit an identity far beyond the scope of chance, this would constitute strong evidence that some genetic program common to all members of the species was decisively shaping the results.

Bickerton (1981) went on to develop the so-called Language Bioprogram Hypothesis (LBH), to the effect that the fully developed grammatical structure of creoles has its exclusive genesis in the innate (genetic) language endowment and linguistic expectations of the first generation children of pidgin speakers, acting in response to the lack of adequate linguistic input from the existing pidgin – a process called nativization. However, Bickerton’s thesis as originally put forth was conditioned on the pidgin not having existed for more than a generation before the creole came into existence, and also on at least 80% of the speech community having come from diverse language backgrounds and not more than 20% of the speech community being speakers of the dominant lexifier language. These conditions proved to be too limiting (Romaine 1988).

There is more to it than that, but suffice it to say that Bickerton undertook to make the innatist or universalist case for the origin of creole languages and for human language in general. His position bears strong similarity to the concept of Universal Grammar (UG) developed by Chomsky (1965). However, one major distinction between the two concepts was Bickerton’s argument for specific innate linguistic structures versus Chomsky’s argument for innate



linguistic parameters (Holm 2000). For example, among the particular creoles which he studied Bickerton identified some 12 syntactic and semantic areas or features which exhibited considerable overlap, a fact of common identity which he argued was beyond chance and therefore supported his thesis (Bickerton 1981:51-72). Subsequent research into creole structure and development and the influence of substrate languages has undermined the strong identity position of Bickerton. Not the least of the problems pointed out is that of defining just exactly what is a pidgin and what is a creole (Thomason 2008). Needless to say, the LBH has proved highly controversial, as has UG.

On the other side, it has been argued by many linguists since Bickerton that creoles owe their genesis to their superstrate or lexifier languages and/or to their substrate languages, as well as other environmental influences (McWhorter 1997; Meyerhoff 2008; Veenstra 2008), a position Bickerton wasn't willing to consider, at least at first.<sup>2</sup> McWhorter, for one, argues against the Language Bioprogram Hypothesis and the centrality of the role of children in nativizing the creole language in Bickerton's hypothesis as too extreme.<sup>3</sup> Although he leans more towards crediting the influence of substrates<sup>4</sup>, McWhorter does not rule out the influence of universal principles. Moreover, he allows in passing that empirical evidence for the nativist role of children in creating grammar may perhaps be found in signed languages, a position to be explored hereinbelow (McWhorter 1997:82).

As noted above, there is ongoing disagreement about whether there are any universal patterns and tendencies in the development of creole languages or whether such patterns as there are can be attributed entirely to substratist influence or to other sources of creole genesis.<sup>5</sup> The ongoing dispute in linguistics over innatism versus empiricism in language acquisition has thus surfaced in yet another venue in the dispute over universalism versus substratism in creoles. However, as McWhorter (1997) comments, most linguists, himself included, take a more or less central position, allowing for both universalist and substratist influence on creole genesis (Kouwenberg & Singler 2008b).

Given time and circumstance – and creoles are very young languages by the standards of the world's languages – a diversity like that which exists crosslinguistically in the world's more mature languages may arise as well in creole grammatical systems, especially during the process of decreolization, if the creole begins to assimilate to the lexifier language. But the interesting question explored here is what emerges in the way of a case, word order, and agreement system

in a creole, and does the evidence for such a system bear on the argument for innate linguistic structures? I argue that the patterns that emerge cross linguistically among the creole languages studied in this thesis provide support for the notion of innate linguistic structures and to that extent they shed light on the genesis of languages generally.

In a later discussion of Bickerton's hypothesis, McWhorter (1997:160) attributes to Bickerton the suggestion that certain structural features in a language are inherent in and indispensable to language and will always evolve during the expansion of a pidgin into a creole. The implication is that the evolution of these features is not necessarily dependent upon nativization of the language by children but could occur through adult development of a creole as well. McWhorter (1997) himself seems to suggest that creoles may develop core indispensable features out of functional necessity because of a lack of time to develop much grammatical machinery beyond that, and that therefore what creoles have in common could very well be indicative of what these core features of language are.

The data gathered in this thesis will develop this idea of core indispensable features shared in common by the subject languages in their respective case, word order, and agreement systems. This approach is intended to test the concept of linguistic universality in a new way. To this author's knowledge this has not been done before. This question is particularly interesting with respect to signed languages, where the substratist argument is more difficult to maintain and the innatist position is more sustainable. Accordingly, this thesis will investigate the case, word order, and agreement systems of several widely separated and arguably unrelated creoles in order to test for patterns which are indicative of core concepts. In particular, it will show how signed languages have something unique and significant to contribute to the discussion. In accord with both Bickerton's and McWhorter's observations, this thesis will show that the emergence of case, word order, and agreement in the subject creoles supports the argument for universal innate linguistic principles.

What makes the signed languages of particular interest is the lack of even a lexifier language. Arguably American Sign Language may have some French or English lexifier and/or substrate influence, but Nicaraguan Sign Language (NSL) is woven essentially out of whole cloth, as will be discussed in Chapter 6. What emerged when deaf children were left to themselves to develop a language, without the influence of a lexifier language or substrate languages, constituted a classic kind of experiment, a set of conditions otherwise impossible to

set up with speaking children. The famous history of Genie (Carroll 2008:327-29) shows that one child left alone, an abused child at that, without linguistic interaction, cannot (or did not) develop appropriate language on its own, especially syntactic competence. But the deaf children in Nicaragua, by far most of whom were born to hearing parents, had each other in sufficient number as linguistic influences and so were able to develop their own complete signed language. The formative conditions of NSL represent a situation in which the key variables of outside linguistic influences were able to be controlled, thereby allowing researchers the opportunity for a more rigorous analysis of linguistic genesis. What then emerged in the way of a case, word order, and agreement system is highly probative of what is universal and fundamental in language (Kegl 1999).

## 1.2 Organization of the thesis

As part of a review of the relevant literature, the definition of pidgin and creole will be set forth in section 2.1 below, the general concepts of case, word order, and agreement will be reviewed in section 2.2 below, and the various modalities of case, word order, and agreement will be presented in section 2.3 below. Chapter 3 will set out the overall methodology of this thesis. Chapter 4 will begin the research portion of the thesis by summarizing the patterns of case, word order, and agreement found in the world's languages generally and in creoles in particular as documented in comprehensive surveys. Chapter 5 will provide studies of the case, word order, and agreement systems of five written creoles, chosen for their geographic and historical diversity and for the diversity of their lexifier languages: viz., Tok Pisin, a language of the South Pacific, with English as its major lexifier language; Haitian Creole, an Atlantic creole with French as its major lexifier language; Afrikaans, a South African language with Dutch as its major lexifier language; Cape Verdean Creole, a language of the Cape Verde Islands with Portuguese as its major lexifier language; and Sango, a language of East Africa with Ngbandi as its major lexifier language. Chapter 6 will then investigate two signed languages that qualify as creoles: American Sign Language and Nicaraguan Sign Language. Chapter 7 will contain a discussion and analysis of the findings, and Chapter 8 will state the overall conclusion and contain suggestions for further research. A tabular summary of the data will be found in the Appendix attached at the end.

## Chapter 2 Literature review

### 2.1 Definitions

It is helpful here to establish some definitions. Holm (2000) sets forth the traditional definitions of a pidgin and creole, as does Thomason (2008). According to those authors, pidgin is a reduced and simplified outgrowth of the contact of various substrate languages of a nonhomogenous speech community, such as arises when persons without a common language and culture are thrown together as slaves on a plantation or as forced laborers in various commercial contexts. A creole is then said to grow out of a pidgin into a full-fledged language in its own right, responsive to the needs of a speech community to communicate effectively with one another beyond the immediate workplace. What begins as a pidgin, a nonnative second language, a kind of lowest common denominator lingua franca of persons thus thrown together, becomes a native first language of the succeeding generation, and in the hands and mouths of children and young people undergoes morphosyntactic expansion as their innate linguistic capacity shapes and forms it (Holm 2000:4-7). This is the life-cycle model of creolization, of which nativization is a crucial component (Romaine 1988; Kouwenberg & Singler 2008b). This definition fits well with Bickerton's idea of a creole being a nativization of a pidgin.

It is an essential part of this definition that a creole is not simply a dialect of the lexifier language and is definitely not a corrupted version of the lexifier language, as was at first supposed by many Europeans. It is true, however, that the lexifier language exerts a strong influence on the creole, mostly in the sense that it is the origin of much of the vocabulary of the creole, while on the other hand those who speak the creole have always felt free to adopt their own syntactic and grammatical structures (Holm 2000:1; Michaelis et al. 2013c).

The above definitions and the life-cycle model proved to be too simplistic, as more and more research into the world's pidgins and creoles showed. For example, such research tended to make clear that there is a continuum between pidgins and creoles, that sometimes pidgins simply become expanded pidgins before developing into a creole without nativization in the second generation of use or without developing into the traditional notion of a creole at all or sometimes never develop beyond the jargon stage, and that sometimes creoles develop without ever going through a pidgin stage and sometimes decreolize into their lexifier language (Romaine 1988; Holm 2000).

The creoles studied in this thesis lie at different points along this continuum, with more or less idiosyncratic differences. However, there is enough similarity in the basic structures of the case, word order, and agreement systems to allow generalizations to be drawn.

## 2.2 The concepts of case, word order, and agreement

Case takes so many different forms in different languages that it may be useful to think of it as simply a cover term for everything that can be classified as a case related phenomenon (Butt 2009; Eisenbeiss et al. 2009). However, there is consensus that a key unifying aspect of case is its function in denoting a grammatical and/or semantic relationship or dependency between nouns and their head, including the semantic relation between adjuncts (nonarguments) and a verbal head, by way of inflectional markings or adpositions (Blake 2001; Butt 2009; Haspelmath 2009; Primus 2009; Siewierska & Bakker 2009). Case helps to answer the question ‘who did what to whom and where, when, how, etc.’ by identifying the role of each noun phrase (NP) in a sentence.

The order of the subject, verb and object(s) is a second way in which words are connected grammatically and semantically. There are six potential orders in which subjects, verbs and objects can be juxtaposed, but when it comes to creoles, only SVO and SOV are of meaningful significance (Dryer 2009b). Also, morphological subject and object agreement with verbs and modifier/determiner agreement with the case of nominals, in terms of person, number and gender, is a third way to express such relations. These three different strategies all have essentially the same function, which is to establish grammatical and semantic connections or relations. Indeed, language is said to have case, word order, and agreement as three complementary strategies for encoding grammatical and semantic relations and to regard them as on a par with each other (Malchukov & Spencer 2009b; Siewierska & Bakker 2009; Siddiqi 2014).<sup>6</sup> In that sense they can be thought as one system for marking<sup>7</sup> grammatical and semantic relations.<sup>8</sup>

As Siddiqi (2014) points out, word order is syntactic and structural in nature and case and agreement are morphological in nature, hence they come at their encoding roles in somewhat different ways. Languages that rely on both word order and agreement to convey grammatical and semantic relations are less reliant on case for reasons of redundancy. English is a good example of a word order language with very little case inflection except with pronouns.<sup>9</sup>

Conversely, free word order languages tend to make use of case marking, or in other words, languages that rely on case morphology feel freer to vary word order. Latin is a good example of this approach (Spencer 2009). And languages that rely on agreement are also less dependent on word order. German exemplifies this strategy (Butt 2009; Siewierska & Bakker 2009).

Besides marking the dependent relationship of a noun to its head, case has two other significant functions which apply especially to arguments. One is to differentiate or distinguish the subject of a transitive verb, the object of a transitive verb, and the subject of an intransitive verb in nominative-accusative and ergative-absolutive systems.<sup>10</sup> A second function is to index or characterize properties of the referent of the argument, such as humanness, animacy or definiteness (Primus 2009; Siewierska & Bakker 2009).

While case is in the first instance a relational encoding strategy, agreement is a property indexing strategy and word order is an argument differentiating strategy. There is therefore overlap between the three strategies with respect to argument differentiation and indexing. Word order, such as the placement of arguments before or after verbs, can be used to indicate argument roles by the way it sequences information. So, for example, a verb final language, preceded by the subject and object, almost always relies on case marking for argument differentiation, as case marking will be what a hearer encounters first, but a verb initial language favors agreement marking as a way of connecting the initial verb to its arguments to follow. A verb medial language favors word order over both case marking and agreement marking, as the verb position between arguments allows for the greatest differentiation of arguments (subject, object) by virtue of word order alone (Blake 2001:15; Siewierska & Bakker 2009).

Siewierska and Bakker (2009) also note that case marking occurs together with agreement marking more often than it occurs alone in a given language. In regard to word order, the argument for case marking of preverbal arguments and agreement marking of postverbal arguments is that this arrangement provides the most efficient on-line processing for the hearer. In regard to agreement marking (indexation of properties), person agreement (which usually includes gender and number agreement) is a way of making sure that the referents in the discourse are properly correlated, most often as arguments of the verb (Siewierska & Bakker 2009).

As we examine various creoles, therefore, we will be concerned with the relationship of case marking to agreement marking and word order. If the verb is in final position, one would

expect to find a preference for case marking of subject and/or object. If the verb is in initial position, one would expect to find a preference for agreement marking. But since it is generally true that pidgins and creoles tend to be structurally simpler than non-pidgin/creole languages, one would expect to find a relative absence of inflectional case and agreement morphology (Crowley 2008; Meyerhoff 2008). It is also true that in the world's languages agreement marking alone is far more common than case marking alone, although they often appear together (Siewierska & Bakker 2009:299). That being the case, it is posited in this thesis that word order will take precedence in an emerging creole, with verb medial being the preferred position, which makes case marking and agreement less necessary. Restated, verb medial word order, rather than case or agreement marking, will be preferred as the best and simplest initial way to connect the grammatical dots and to achieve argument differentiation in a creole. If the crosslinguistic pattern holds, agreement marking will then more likely appear in preference to case marking. The data will bear this out.

At the outset, it should be noted that the various language speakers who come together to form a pidgin typically strip down their respective languages to core features that they have in common, leaving aside idiosyncratic features (McWhorter 1997). What this means in effect is that inflectional and derivational morphology – case features among other things – are usually or nearly absent, as previously mentioned (Crowley 2008). In the following chapters we will consider what remains after this stripping down and we will show that certain ‘core indispensable’ features (McWhorter 1997:160) exist in the case, word order, and agreement systems in the creoles investigated in this thesis.

### 2.3 The modalities of case, word order, and agreement

To properly identify and evaluate the presence of case in the various creoles being studied, it is necessary to begin with an overview of the various ways in which case manifests itself in the world's languages. The most common way, or at least the one the most easily recognized as such, is the inflectional modality on nominals. Latin is a good example of a traditional inflectional case system, with a variety of nominal endings for nominative, accusative, dative, genitive and ablative cases, and five declensional classes (Spencer 2009). These endings are fusional with person, number and gender in Latin. In the literature such a system is referred to as morphological case, or m-case (Malchukov & Spencer 2009b). Inflectional cases are most

often observed as suffixes, as attested by the World Atlas of Language Structures Online (WALS) (Dryer 2009; Spencer 2009).

Another way in which case is manifested is as syntactic case, or s-case, in which the case of a nominal (or NP) is determined distributionally. That is, the NP's relative structural position in a sentence or phrase indicates its grammatical and syntactic role (Malchukov & Spencer 2009b). A good example of a distributionally determined s-case is found in the subject-verb-object (SVO) word order in English, where the direct object of a transitive verb usually follows directly after the verb, and where there is no morphological marking of the object, pronouns aside. In practice, m-case and s-case coexist and may often correspond or map to each other in a given language, but there are also many exceptions to this generalization (Malchukov & Spencer 2009b).

There are numerous morphological case types in the world's languages, and languages range from having as few as two morphological cases, as seen for example in modern English pronominals and various European dialects, to as many as 84 in a Daghestanian language (consisting mostly of spatial cases) (Arkadiev 2009; Daniel & Ganenkov 2009). The two-case or bicasual case system may represent the last stage of the existence of case in a diachronous sense (e.g. English used to have many more morphological cases) but it may also represent the initial stage of existence of case in a developing language, a point which has particular relevance with respect to creoles (Arkadiev 2009). Finally, there are languages with no case marking at all (for example, Lao, which establishes case relations in other ways) (Enfield 2009). And there is the Chomskyan construct of Abstract Case, which provides that case is an abstract and universal concept, always present whether or not marked overtly (Blake 2001; Bobaljik & Wurmbrand 2009).

The most common cases found in the world's languages include nominative, accusative, genitive, dative, ablative, vocative, and locative, instrumental, and comitative, but there are various subsidiary locative spatial cases, such as adessive, abessive, inessive, allative, elative, and illative. One also encounters equative, partitive, benefactive, superessive, perlativ, purposive and pergressive cases, to name just a few more (Haspelmath 2009; Malchukov & Spencer 2009b). As will be shown, locative cases are among the first cases to show up in creole languages.



There exists evidence of a hierarchical organization among the various cases in the world's languages, in which cases lower down in the hierarchy imply the presence of cases higher up (Blake 2001:89). Blake proposed the following case hierarchy, with the highest case being on the left and the implication being from right to left:

(1) NOM > ACC, ERG > GEN > DAT > LOC > INS, ABL > OTHERS

It follows from this hierarchy that at a minimum one should expect to encounter in a language the nominative and accusative (or ergative) cases, which as noted above has particular relevance for the development of case in creoles. A three-case system would then include the genitive. Markedness increases as one moves to the right, and often enough the nominative case is the unmarked default case (Koenig 2009).

The emergence of inflectional case markers also follows a general directionality. Most frequently case forms develop from nominal and verbal forms as their ultimate source, passing through intermediate stages as they become grammaticalized. Heine et al. (2009) and Blake (2001) suggest that the order of progression is as follows:

(2) noun, verb > adverb > adposition > case affix > loss

To this order of directionality there could probably be added a further intermediate stage or stages consisting of particles and clitics between adposition and case affix. In fact, the great majority of case affixes look back to an adposition or a clitic as their most immediate source, and most commonly these are adpositions of location, source or destination, and instrument, which may take the form of a clitic hosted by a nominal where eventually that hosting became so fixed as to become a suffix (Haspelmath 2009; Heine 2009). Extension or broadening in usage, with generalization of meaning, is the most readily observable process by which a precursor lexical item grammaticalizes into a case marker (Heine 2009). This suggests adpositions or clitics may be a logical place to look for the beginning of case in creoles.

Related to the question of whether and how case is marked is the question of the informational role of case. Different kinds of information are conveyed by the different ways of marking case. Thus, s-case conveys information about grammatical structure (subject, direct object, and indirect object), semantic or lexical case (l-case) conveys information about semantic roles (e.g. Agent, Patient, Theme and Recipient), and discourse-pragmatic case conveys information about such matters as focus and topic (Malchukov & Spencer 2009b). There is a well attested correspondence between semantic and syntactic roles in many languages, which is a

feature of GB-Minimalism, but such correspondence is not strictly one-to-one (Butt 2009). Since the primary force of creoles is the need to communicate in order to create a speech community that functions beyond just the workplace, one might expect a primary emphasis on lexical case, that is, the marking of semantic roles, at least initially. This is just another way of saying that grammatical complexity is secondary to the transmission of meaning.

The modalities of word order have been previously referred to, with subject, verb and object (S, V and O) appearing in only six possible orders. As previously discussed, the verb medial word order is the most likely word order to be encountered in creoles, since that order allows the easiest argument differentiation without reliance on case and agreement marking.

The modalities of verb-argument and verb-adjunct agreement marking are more involved crosslinguistically. Agreement morphology is inflectional (rather than derivational). One school of thought categorizes agreement morphology as weakly lexical, which means that agreement morphology is constructed syntactically rather than lexically.<sup>11</sup> In any event, agreement morphology is affixal (Siddiqi 2014). As noted above, it prefers not to occur alone.

## Chapter 3 Methodology

The methodology I followed in this thesis consisted first in investigating case, word order, and agreement patterns in the world's languages generally and in the subset of the world's languages composed only of creole languages, using data obtained from the World Atlas of Language Structures<sup>12</sup> and The Atlas of Pidgin and Creole Languages, respectively.<sup>13</sup> I then investigated the patterns of case, word order, and agreement found in the five written and two signed creole languages previously identified, based on various texts, grammars and synopses of the languages in question. I proceeded to identify the relationship system of case, word order, and agreement in each such language and to identify which element of that system took priority as indicative of the early genesis of such language.

The several creole languages studied were chosen for their geographic diversity, having arisen in the South Pacific region, in the Caribbean, in and off the coast of Africa, and in North and South America, all having different lexifier languages, albeit mostly European. They also represent a continuum in historical development, from the very youngest creole, Nicaraguan Sign Language, which was born in the 1980's, to Cape Verdean Creole, which had its earliest beginnings in the 16th century, all with differing historical influences. Two signed languages were chosen for study because they represented an entirely different modality of language, but which nevertheless qualify as creoles. Nicaraguan Sign Language was the most interesting creole of all, written or signed, for purposes of this study, because of the unique circumstances of its genesis.

The next step was to compare the results of this investigation across the various creoles, focusing on what I perceived to be the core indispensable features that were present in the case, word order, and agreement systems of such languages. I took into account the history and age of each creole and the relative strength of the lexifier language, all of which have a bearing on the development of case, word order, and agreement features and which help to account for the many idiosyncratic differences which exist among the several languages as well as the general overlapping patterns. These results are set forth in tabular form in the Appendix at the end of the thesis. In turn, the specific language results were compared with the broader survey statistics taken from the two Atlases. Special focus was placed on the differences between the signed and the written creole languages, particularly as they were manifested in the differences in modality between the signed and written languages.

Finally, based on the patterns that I was able to identify, I state my conclusions about what the core indispensable features of the case, word order, and agreement systems of these creole languages are and to what extent they are shared. From these conclusions I argue that these core indispensable features lend support to the argument for the innateness and universality of the language faculty. Given that this thesis is narrowing in on case, word order, and agreement patterns in the various creole languages being studied, no attention was paid to the tense, mood or aspect (TMA) differences among the several languages, or to whether verbs are stative or nonstative, transitive or intransitive, realis or irrealis in nature.

## Chapter 4 Patterns of Case, Word Order, and Agreement in the World's Languages Generally and in the Subset of Creole Languages

The following patterns of case, word order, and agreement in the world's languages generally and in creoles in particular have been documented in the World Atlas of Language Structures (WALS) and in The Atlas of Pidgin and Creole Languages (APiCS).

WALS tabulated case marking in 261 languages (Iggesen 2013) as follows:

Table 4.1 – Case Marking in WALS

no case marking	100
2 cases	23
3 cases	9
4-5 cases	21
6-7 cases	37
8-9 cases	23
10 or more	24
other	<u>24</u>
total	261

Thus, over 50% (132 out of 261) of the languages for which WALS collected information had either no case marking or only two or three cases, which as discussed in Chapter 2 above would most likely include the nominative, accusative/ergative, and genitive cases. No case marking at all obviously predominated. This of course suggests that these languages rely on a different strategy to establish grammatical relations.

The data provided by APiCS shows just how infrequently patient marking in creoles occurs (personal pronouns were looked at separately) (Haspelmath 2013a):

Table 4.2 – Patient Marking in APiCS

no patient marking	62
only definite NP's marked	2
only animate NP's marked	8
only definite and animate NP's marked	2
all patients marked	<u>2</u>
total	76

This is consistent with the observation that pidgins and creoles tend to lack inflectional morphology and therefore begin life at the isolating end of the language synthesis continuum (Crowley 2008; Siddiqi 2014). As discussed in section 2.1 above, word order is an alternative to case, and the word order that is least dependent on case marking is verb medial (SVO or OVS).

When it comes to the distribution of word order, according to WALS, 565 languages out of 1,377 surveyed utilize SOV word order (41%) and 488 languages utilize SVO (35%) (Dryer 2009b):

Table 4.3 – Word Order in WALS

SOV	565
SVO	488
VSO	95
VOS	25
OVS	11
OSV	4
no dominant word order	<u>189</u>
total	1,377

SVO is evidently not quite the dominant word order among the world’s languages.

However, according to APiCS, 61 out of 71 creoles, or 93%, utilize SVO word order exclusively, only one utilizes SOV word order exclusively, and no creole language uses any of the other word orders exclusively. There are 10 or 11 languages that use both SVO and SOV word orders on a shared basis. See Table 4.4 (Huber 2013). The predominance of SVO word order in creoles is consistent with a lack of morphological case marking, as previously noted (Crowley 2008).

Table 4.4 – Word Order in APiCS

	exclusive	shared	all
SVO	61	10	71
SOV	1	11	12
VSO	0	7	7
VOS	0	3	3
OSV	0	3	3
OVS	0	2	2

With respect to the case marking alignment of subject (S), agent (A), and patient (P) in full NP’s, WALS reports as follows (Comrie 2009a):

Table 4.5 – Case Marking Alignment in WALS

neutral (S, A, and P all marked the same)	98
nom-acc (standard) (S and A the same, P different)	46
nom-acc (marked nominative)	6
erg-absol (S and P the same; A different)	32
tripartite (all marked different)	4
other	<u>4</u>
total	190

The neutral alignment, with S, A and P all marked the same, which generally means no marking at all, is the dominant alignment. Accusative alignment is somewhat greater than ergative alignment. APiCS found the neutral alignment of case marking of full NP's to be even more dominant, which is consistent with the above data about case marking in creoles generally, at least with respect to NPs, with ergative alignment among creoles hardly even making a showing (Haspelmath 2013b):

Table 4.6 – Case Marking Alignment in APiCS

neutral	61
accusative	14
ergative/absolute	<u>1</u>
total	76

However, the story is somewhat different when it comes to personal pronoun case marking alignment in WALs (Comrie 2009b):

Table 4.7 – Personal Pronoun Case Marking Alignment in WALs

neutral (S, A, and P all marked the same)	79
nom-acc (standard) (S and A the same, P different)	61
nom-acc (marked nominative)	3
erg-absol (S and P the same; A different)	20
tripartite (all marked different)	3
active-inactive	3
none	<u>3</u>
total	172

Nominative-accusative pronoun case marking is now 35% of the total instead of 23% of full NPs, and ergative-absolute pronoun case marking drops from 17% to 12%. In other words, we see relatively more case marking of object (Patient) pronouns in the world's languages than of full NPs.

APiCS provides only a breakdown between accusative and neutral alignments in creole languages, with accusative marking of pronouns clearly the preferred alignment and no ergative marking appearing at all (Haspelmath 2013c):

Table 4.8 - Personal Pronoun Case Marking Alignment in APiCS

accusative (subject-object distinction)	54
neutral (no subject-object distinction)	22
ergative	<u>0</u>
total	76

Haspelmath argues that an implicational relationship exists in that creole languages with full NP accusative marking will also have personal pronoun accusative marking.

With respect to ditransitive verbs, there are three possible constructions: (1) indirect object, in which the monotransitive patient (P) and the ditransitive theme (T) are treated the same as the direct object, and the recipient (R) has a specific case marker or adposition; (2) double object, in which T and R are coded the same as the monotransitive P, usually without any special marking; and (3) secondary-object, in which R is coded the same as P, and T is coded differently as the secondary object. The data in WALS show the following breakdown (Haspelmath 2009b).

Table 4.9 - Ditransitive Marking in WALS

indirect object (marking)	189
double object (no marking)	84
secondary object (marking)	65
mixed	<u>40</u>
total	378

The indirect object construction, which involves a case marker or adposition, is preferred in the world's languages.

Interestingly, the double object construction is the preferred construction overall in creole languages, as documented again by Haspelmath (2013d), but this preference varies depending on Asian and Melanesian languages (indirect-object preference) versus Atlantic and Indian Ocean languages (double-object preference):

Table 4.10 – Ditransitive Marking in Creole Languages

	exclusive	shared
double-object	31	29
indirect-object	16	28
secondary-object	0	1
total of double-object, exclusive and shared, plus indirect-object, exclusive:	76 languages	

In short, it is hard to generalize about which construction is really the preferred one.

The order of R and T in ditransitive constructions in creoles languages is congruent with the earlier data about the preferred word order of S, V and O noted above (Huber 2013), as it shows a preference for the verb medial position (Haspelmath 2013d):



Table 4.11 – Object Order in Creole Languages

	exclusive	shared	all
1. S-V-T-R	23	39	62
2. S-V-R-T	6	39	45
3. S-T-R-V	0	5	5
4. S-R-T-V	2	6	8

One and two co-occur with SVO word ordering and account for 89% of the cases.

In summary of the above, the data provided by WALS show that 38% of the world's languages had no case marking, 35% preferred SVO word order, 52% used neutral alignment of full NPs (all arguments are marked the same, usually meaning no marking), 37% use nom-acc marking of personal pronouns (distinguishing between subject and object), 50% use indirect object constructions (with marking) and 22% use double object constructions (with no marking). The data provided by APiCS, on the other hand, show that 82% of creoles have no patient marking, 93% prefer SVO word order, 80% prefer neutral alignment of full NPs, 71% use subject-object distinction marking of personal pronouns, 21% use exclusive indirect object constructions, 41% use exclusive double object constructions, and 37% use shared constructions. These data are tabulated side-by-side in Table 4.12 below.

As expected, it is clear that written creole languages have a bias against case marking and in favor of SVO word order (in both transitive and ditransitive constructions). At the same time, written creoles make a pronominal subject-object marking distinction almost twice as often as in languages generally. Also, it is evident that languages generally prefer indirect object constructions with adposition marking of the Recipient, whereas written creoles overall seem to have a preference for double object constructions without any special marking of the Recipient.

Table 4.12 – WALS/APiCS Comparison

	<u>WALS</u>	<u>APiCS</u>
no case marking	38%	
no patient marking		82%
SVO word order	35%	93%
neutral alignment (full NPs)	52%	80%
subject-object distinction, personal pronouns	37%	71%
indirect object constructions	50%	21%
double object constructions	22%	41%
shared constructions		37%

## Chapter 5 Written Creole Studies

### 5.1 Tok Pisin

5.1.1 Background. Tok Pisin is a dialect of Melanesian Pidgin but is the most widely spoken of three national languages of Papua New Guinea (English and Hiri Motu being the other two languages). It is spoken by 3 to 5 million persons, of whom it is estimated that some 500,000 use it as a first language (Smith & Siegel 2013). It is spoken in Parliament, although English is the official language of government and education. There is an unofficial virtual standard of Tok Pisin, and that is the dialect version used in the Tok Pisin translation of the Bible (Verhaar 1995). We will be examining this version.

The lexifier or superstrate language of Tok Pisin is English. There are often three levels of social dialect in a creole, based on the relative influence of the lexifier language, referred to as the acrolect, the mesolect and basilect. The acrolect of Tok Pisin is the dialect version that is the most influenced by English as the lexifier language, which is used in urban and wealthy circles, the mesolect is spoken more in rural areas, and the basilect is the version that is the least influenced by the lexifier, spoken more in outlying areas. The standard version of Tok Pisin is mesolectal (Verhaar 1995).

In the course of the nineteenth and twentieth century the dialect Tok Pisin became the lingua franca for an area with some 850 distinct indigenous languages, but Hiri Motu provides strong competition in the south region (Smith & Siegel 2013). It is said to be a late-stage or expanded pidgin that has been creolizing only gradually. The precursor of Tok Pisin was a form of Pacific Pidgin English, but a distinctly Melanesian variety began to emerge around 1863 as a result of the Pacific labor trade (Smith & Siegel 2013). In 1884 Britain and Germany declared protectorates over parts of New Guinea, Germany having colonized northern New Guinea and Britain the southern portion, named Papua. Pidgin English, the predecessor of Tok Pisin, became firmly established in both sectors. The Dutch had already colonized the western part of New Guinea, which became part of Indonesia. Peaceful interaction existed between the north and south, resulting in the spread of Tok Pisin as a lingua franca. As it spread beyond the plantation to domestic servants, the police and government, and into newspapers and radio broadcasting, it began the process of expansion for use among and between the native speakers and not just as a language of communication with the colonizers (Verhaar 1999; Holm 2000; Smith & Siegel 2013). However, this nativization was brought about by adult speakers, not by the children of the

speech community; adoption of Tok Pisin as a first language at the child level is first traced to the 1960's (McWhorter 1997). The fact that Tok Pisin existed as a pidgin and attained a degree of complexity on its own alongside the substrate influences of Austronesian languages without abrupt creolization by the first generation of children of pidgin speakers that was a hallmark of LBH, eliminates Tok Pisin as a candidate for Bickerton's hypothesis (Romaine 1988).

5.1.2 Grammar. There is no grammatical inflection on nouns or the marking of grammatical gender in Tok Pisin (but see the discussion of the particle *i* and the various prepositions below). Verbs in Tok Pisin appear in their infinitive form, without any variation to mark<sup>14</sup> person, number or gender in agreement with their arguments, except that the suffix *-im* is added to a verb stem as a marker of transitivity. Person and number are marked by the personal pronouns and gender is left to discourse for differentiation. Personal pronouns, such as *mi* 'me', *yu* 'you' and *em* 'he/she/it' remain uninflected in subject, direct object, and indirect or prepositional object position. All these pronouns may be followed by the reflexive *yet*, meaning 'self', which is indeclinable. The plural pronoun is marked with *-pela* as a suffix, hence *mipela* 'we' and *yupela* 'you (pl)', *ol* 'they', being the exception. There is an inflectional way of indicating inclusive and exclusive first person plural: *mitupela* 'we exclusive' and *yumitupela* 'we inclusive', where *tu* means 'two' (Siegel & Smith 2013; Verhaar 1999). Two examples will illustrate the inflection and pluralization of the first person plural pronoun (Verhaar 1999):

(1) *haus bilong mipela* 'house belonging to us (not including you)'

(2) *haus bilong yumi* 'house belonging to us (including you)'

*Pela* is also an adjectival marker without a separate meaning, either attributively or predicatively. If attributively, it always precedes the noun it modifies. In other words, it marks a grammatical relation but is not an agreement suffix as such (Verhaar 1999):

(3) *bikpela taun* 'large town'

(4) *taun i bikpela* 'the town is large'

The plural of nouns is marked with '*ol*', as in *ol pikinini man/meri* 'sons/daughters'. Thus, nouns are not declined inflectionally for number. *Ol* is not the same as an article in Tok Pisin, and may or may not be interpreted as 'the' or 'some' (Verhaar 1999).

The division of sentences into subject and predicate is marked by the particle *i*. There is substrate evidence that it was originally reanalyzed as a subject-referencing pronoun and later as a marker separating subject from predicate. This referencing aspect of *i* is triggered by either a

third person subject or a subject with a third person element in it. Hence, examples (5) and (6) do not use *i* but examples (7) and (8) do, example (8) because it references other persons (Verhaar 1999; Siegel & Smith 2013):

- (5) *Mi amamas*. ‘I am happy.’
- (6) *Yu amamas*. ‘You [sg.] are happy.’
- (7) *Em i amamas*. ‘He/she is happy.’
- (8) *Mipela i amamas*. ‘We [exclusive] are happy.’

In this sense, *i* is a type of subject marker in its role as a particle and not as a morphological affix, and it is triggered by non-deictic subjects, hence not first or second person. *i* is also triggered by a remote subject pronoun in a deictic context, meaning a subject that is not immediately followed by the predicate and where the predicate is equational or identifying, as in (9) (Verhaar 1999):

- (9) *Yu wanpela i les*.  
 You one PRED tired.  
 ‘Only you are tired.’

Finally, *i* can be used impersonally, without a subject, but this is not the same usage as ‘it’ or ‘there’ in English (Verhaar 1999):

- (10) *I gat tupela tim*. ‘There are two teams.’

As mentioned, there is a common verbal derivational suffix in Tok Pisin which converts intransitive verbs into transitive verbs, which is the suffix *-im*. For example: *askim* ‘to ask’; *bungim* ‘to gather’; *lokim* ‘to lock’; *hatim* ‘to heat’; and *autim* ‘to express’. *-im* is very productive, as the foregoing examples show, applying to verbs, nouns, modifiers and adverbs as well as verb stems. In a sense, *-im* creates an agreement relation in that it calls for both a subject and an object (Verhaar 1999; Siegel & Smith 2013).

We should look to word order, therefore, as the primary means of communicating grammatical relations. Primary word order is SVO, with stylistic variations. Even yes-no questions retain this word order and mark the question with a rising intonation (Verhaar 1999; Siegel & Smith 2013).

In Tok Pisin, the subject normally precedes the predicate and if it is a pronoun, sometimes occurs resumptively. The direct object follows the predicate unless it takes a focus position. If there is an indirect object, sometimes it immediately follows the predicate and precedes the direct object, but only with the verbs *givim* ‘give’ and *soim* ‘show’ in a double

object construction; otherwise, the indirect object follows the direct object. The direct object in a double object construction, and the indirect object in constructions other than with *givim* and *soim*, are marked by the preposition *long*, as in (11), which highlights *long* and the direct object in bold and in (12), which highlights *long* and the indirect object in bold (Verhaar 1999):

(11) *Bilong wanem yu askim mi **long nem** bilong mi.*

Why you ask me for name my.

‘Why do you ask me my name.’

(12) *Yu ken raitim pas **long ol.***

You can write a letter to them.

‘You can write a letter to them.’

*Long* is a very versatile preposition and can also be used to mark what in other languages would be considered the locative and instrumental cases, as in (13) and (14), as well as many other spatial cases; its meanings include ‘at’, ‘by’, ‘from’, ‘in’, ‘on’, ‘to’, and ‘with’ (Verhaar 1999):

(13) *long bekri* ‘in the bakery’

(14) *long spet na long baira* ‘with a spade and a fork’

The preposition *wantaim*, meaning ‘with’, marks the comitative case. The preposition *bilong* marks the genitive case and precedes the possessor. The preposition *winim* marks the non-equative case, with a ‘more than’ meaning. See (15), (16) and (17) below, respectively (Verhaar 1999):

(15) *ol i wet wantaim tupela fren*

they PRED waited with two friends.

‘they waited together with two friends’

(16) *samting bilong yu*

something GEN you

‘your problem, responsibility’

(17) *hat bilong gris i winim hat bilong wara.*

hot GEN fat PRED more than hot GEN water.

‘hot fat is hotter than hot water.’

Tok Pisin also has serial verb constructions (the use of two verbs together to convey one meaning), with *i go* or *i kam* paired with another verb that together express directionality and change. Typically the preposition *long* carries out the meaning (Verhaar 1999). For example:

- (18) *Karim sikman*            *i*            *go long haus sik.*  
       Carry sick person        PRED go to        hospital.  
       ‘Take the sick person to the hospital.’

The fact that there is no overt inflectional case marking on nouns and pronouns in Tok Pisin does not argue against the existence of case if one accepts the notion of Abstract Case, as argued for by Chomsky (2015). But in any event it is very common in creoles to mark case with free morphemes/adpositions rather than with inflectional morphemes (Holm 2000). In short, it would not be correct to say that Tok Pisin lacks case marking, only inflectional case marking. Also, the lack of morphological complexity in itself should not be taken as evidence of substrate influence, since as previously noted presented in Table 4.1 above, such lack is widespread in the world’s languages. On the other hand, the use by Tok Pisin of dual and trial pronoun forms, and of the inclusive and exclusive plural pronoun forms, does constitute evidence of some Austronesian substrate influence (Holm 2000).

In summary, Tok Pisin lacks inflectional case or plural marking on nouns but has some adpositional case marking, the most important adposition being the genitive marker *bilong*. It also has a system for marking the subject of a sentence by the use or nonuse of the predicate marker *i*. Tok Pisin uses only the base form of the verb and thus lacks verbal agreement with its arguments except for the suffix *-im*, which at least implies the existence of both a subject and an object. It lacks gender marking but depends on context to distinguish gender. *Ol* is used to mark the plural of nouns. Tok Pisin also follows SVO word order, as do the great majority of creoles.

## 5.2 Haitian Creole

5.2.1 Background. The island of Hispaniola in the Caribbean was first colonized by the Spanish beginning in 1492, but the French wrested control of the western third of the island from Spain in 1697. Harsh and brutal slavery of the natives, and later of hundreds of thousands of imported black Africans, was the driving economic force of the colony. Many slaves rebelled, creating maroon societies in the forests and mountains, from which they waged guerilla warfare on the plantations. Finally labor conditions became so oppressive that revolts broke out, beginning in 1791, resulting in independence in 1804, the world’s first successful slave revolt that was not subsequently overturned (Fouron 2010; Spears 2010).

The success of the Haitian Revolution, especially in that it created a nation out of black freed slaves, posed great difficulties for other slave owning societies at that time. The United States refused to recognize Haiti as a nation for a long time. Germany, France and the United States sparred over economic control of Haiti in the 19th century, and the United States even occupied Haiti from 1915 to 1934. Subsequently Haiti continued to experience political and social turmoil, most of the tension being centered on long standing social and racial issues and Haiti's long isolation from the international community. There followed several repressive regimes and military coups, including the infamous regime of "Papa Doc" Duvalier. True democracy and the rule of law has yet to be established in Haiti, and some observers go so far as to consider Haiti a failed state (Fouron 2010).

What has been the effect of the political and social upheavals in Haiti on the Haitian language? One effect has been a steady stream of emigrants from Haiti to the United States, Canada, the Dominican Republic and elsewhere in what is termed the Haitian diaspora, bringing their language with them and exposing Haitian Creole (hereinafter 'HC') to contact with English, with major effect on the lexicon. HC is spoken today by about 9.5 million persons in Haiti proper (the western part of the island of Hispaniola of which the Dominican Republic is the eastern part), but another two million speakers can be found in the United States and other parts of the Haitian diaspora. It has been stated that there are more speakers of HC in the world today than of any other known creole and that HC is the furthest along in the process of standardization (Fouron 2010; Fattier 2013).

French is the lexifier language of HC and is an official language of Haiti alongside HC, but is spoken by only about 5-15% percent of the population, depending on who is counting. French is considered the language of the elite, the language of prestige, government and education, and hence of the dominant social class, but HC is the language of the people, spoken by all Haitians, and it has been gaining ground recently in government, education and the media (Zephir 2010; Jean-Louis 2012; Fattier 2013). The two languages are coexistent but distinct. It has been only in the mid-20<sup>th</sup> century that a systematic orthography has been developed for HC (Romaine 1988; Faraclas et al. 2010).

In the beginning both French and HC were well established in Haiti by the 17<sup>th</sup> century, French by the colonization of Haiti and HC by the importation of huge numbers of African slaves, as many as 800,000 in number, during the shift of labor to large plantations and the

intermingling of West African substratum languages. These Africans came from a huge swath of African territory with mostly oral languages which are therefore hard to document, making it difficult to assess their relative substrate contributions to HC (Zephir 2010; Fattier 2013). During the plantation phase the slave population lost daily contact with French and adult native speakers began to develop HC as a pidgin/creole, approximately between 1680 and 1740. At the same time a social stratification arose among field slaves, domestic slaves, mulattoes, and plantation owners, with French being the language at the top and HC at the bottom, a situation of diglossia among those who spoke both. The continuing contact of HC with French at some level also constitutes to an extent a situation of decreolization, resulting in basilectal, mesolectal and acrolectal varieties of HC. The rather rigid class system based on language, color, religion, and social origin continues to dominate Haiti today (Romaine 1988; Fouron 2010; Zephir 2010).

5.2.2 Grammar. Like other creoles, HC does not use inflectional endings on personal pronouns in subject, direct object, and indirect or prepositional object position. The following is the paradigm for both the personal pronouns and the possessive pronouns (Jean-Louis 2012):

Table 5.2.1- Haitian Creole Personal Pronoun Paradigm

	<u>long form</u>	<u>short form</u>	
1sg	mwen	m	I, me, my
2sg	ou	w	you (sg), your
3sg	li (ni)	l	he, him, his, she, her, it, its
1pl	nou	n	we, us, our
2pl	nou	n	you (pl), your
3pl	yo	y	they, them, their

The shortened forms are commonly used before verbs and after a preceding vowel, but not after a preceding consonant. They often cliticize on a preceding stressed syllable. Nouns are also not marked with inflectional endings and are indeclinable in all positions. The plural of nouns is marked by the definite determiner *yo* unless the plural is clear from the context. The indefinite determiner is *yon* and it has no plural. The indefinite determiner precedes the noun or noun phrase and the definite determiner follows the noun or noun phrase, as in (Jean-Louis 2012; Fattier 2013):

- (1) *yon kay* ‘a house’
- (2) *timoun yo* ‘the children’(lit. ‘child they’).



The reflexive is marked by the use of *ko*, the word for body, or *tèt*, the word for head, sometimes preceded by *pou*, after the verb, followed by the personal pronoun (Jean-Louis 2012):

- (3) *Li rale kò l.*  
 He went away REFLEX himself.  
 ‘He went (himself) away.’
- (4) *Jida te touye tèt li.*  
 Judas ANT kill REFLEX himself.  
 ‘Judas killed himself.’
- (5) *M pa pou kò m.*  
 I not REFLEX myself.  
 ‘I am not by myself/alone.’

Gender, semantic or grammatical, is not expressed in HC by inflectional endings, but there are many male and female versions of nouns for persons or relatives, as in Table 5.2.2 (Jean-Louis 2012):

Table 5.2.2 – Haitian Creole Gender Alternations

anmore/anmòrèz	lover
chinwa/chinwaz	Chinese
direktè/direktris	director
mantè/mantèz	liar
vòlè/vòlèz	thief
visitè/visitèz	visitor
monnonk/matant	aunt/uncle
neve/nyès	nephew/niece
nonm/fanm	man/woman
pitit gason/pitit fi	son/daughter

This variation also shows up on certain adjectives, e.g. *serye/seryez* ‘trustworthy’. This kind of gender alternation resembles similar alternations that exist in French, the lexifier language. With animals, natural gender is indicated by use of *mal* or *femel*, as in *mal chen* ‘male dog’ and *femel chat* ‘female cat’ (Fattier 2013).

Verbs in HC have only the non-finite, infinitival form and do not conjugate, although the verb *ale* ‘to go’ can take a progressive form. There is no passive voice as such, but certain verbs, including for example *fèt* ‘to be done’ and *manje* ‘to be eaten’, can take a passive sense without any agency implied. There is no differentiation between transitive and intransitive verbs. Verbs usually end in ‘e’, but the ‘e’ is often dropped, giving a short form.

The lack of verbal conjugation and the indeclinability of nouns means that agreement is not a strategy for determining grammatical relations in HC. Position, or word order, is the

primary means for establishing such relations. Word order in HC is SVO. No subject-verb inversion occurs in yes-no questions but the question is marked by intonation. The subject usually precedes the verb and the direct object comes right after the verb, as in (7) below. If there is an indirect object, it usually immediately follows the verb and precedes the direct object, as in (8) below (Jean-Louis 2012; Fattier 2013):

(7) *M rele l*  
I call him.  
'I call him.'

(8) *M montre w live la.*  
I show you book the  
'I show you the book.'

However, in a few verb phrases that require the use of a certain preposition, such as *bay/ban/ba*, 'to', the direct object comes first and the indirect object comes second and is marked by the specific preposition, as in (9) below (Jean-Louis 2012):

(9) *Pote liv la ban mwen.*  
Bring book the to me.  
'Bring the book to me.'

Other verbs that employ this type of construction and indirect object marking are: *voye...bay* 'to send...to', *vire do...bay* 'to turn one's back to', and *pote...pou* 'to bring...for' (Jean-Louis 2012).

Other prepositions in common use that convey a grammatical relation, i.e. that would take an inflectional case ending on modified nouns as they do in a language like German, include *ak/avèk* 'with' (comitative), *an/ann* 'to/in' (locative), *pou* 'for' (benefactive), and *nan* 'to/in/at/from' (directional).

If a personal pronoun precedes the verb, a predicate noun, or a predicate adjective, it stands in subject position in the sentence, as in (10) below. If a personal pronoun immediately follows a noun, it functions as a possessive adjective (determiner), as in (11), or as a possessive pronoun, as in (12) below. HC generally does not need a copula (Jean-Louis 2012):

(10) *Mwen renmen manje.*  
I like food  
'I like food.'

(11) *Papa m kontan.*  
Father my happy  
'My father is happy.'

- (12) *Manje mwen.*  
 Food mine  
 ‘Food is mine/my food.’

A noun in the possessive or genitive case is preceded by the thing possessed and, optionally, followed by a determiner, but is not itself case marked, thus: possessee + possessor + [opt]determiner, as in (13) below (Jean-Louis 2012):

- (13) *Liv david la*  
 book david DEF  
 ‘David’s book’

The special morpheme *pa* is used to construct the pronominal possessive, as in (14) below (Fattier 2013):

- (14) *Pa m nan pi bel*  
 POSS POSS.1SG DEF more beautiful  
 ‘Mine is more beautiful.’

In summary, HC lacks inflectional case marking on nouns and pronouns, and verbs do not conjugate, hence agreement relations do not exist. Personal pronouns have person and number distinctions, and the plural of definite noun phrases is marked. There is also a form of reflexive marking on pronouns that makes reference to body parts. Word order is SVO, where subjects typically precede the verb and the object always immediately follows the verb, with an alternation between the order of the direct and indirect object depending on certain verb phrases involving specific prepositions. The position of a pronoun before a verb marks it as a subject, but if the pronoun follows a noun, it becomes a possessive determiner. There is a genitive case, in which the possessor is bracketed by the preceding possessee and sometimes by a following determiner; also, the morpheme *pa* is used to mark the pronominal possessive. There is no marking of transitive versus intransitive verbs and no passive voice as such. There is also no gender marking on nouns but there exist various gender specific forms of person words. Prepositions also serve to mark various cases. The fact that adults were responsible for creating HC seemingly rules out application of Bickerton’s LBH, at least as to the second generation children nativization form of the hypothesis.

### 5.3 Afrikaans

5.3.1 Background. Afrikaans is an official language of South Africa along with English and nine tribal languages, with approximately six million speakers of Afrikaans. Although Dutch

is the original lexifier language of Afrikaans, it is not an official language of the country. Most Afrikaans speakers are essentially bilingual in English, and the influence of English on Afrikaans has superseded that of Dutch. Afrikaans is also spoken by many white Africans living in adjacent Namibia and Botswana (Sluijs 2013).

The Dutch, through the Dutch East India Company, were the first to colonize South Africa in 1652 with a settlement at what later became Cape Town. As elsewhere during the European colonial period, slaves were imported to the new colony from other parts of coastal Africa, and also from India, Madagascar and Indonesia, and a speech community began to arise among the heterogeneous components of society. Portugal was the dominant colonial power during this period of European expansionism, and a Portuguese creole arose in many diverse places from where slaves were imported, with some influence on the resulting creole in South Africa. The indigenous Khoekhoe language, German and French, a version of Malay, Austronesian languages and other African tribal languages, were also all represented in the growing mix. Dutch remained the primary language of commerce for a time, but Afrikaans became the first language of Cape society (Ponelis 1993; Sluijs 2013).

Afrikaans was directly affected by contact with these various other languages in the 17th and 18th centuries. At the end of the 18th and beginning of the 19th centuries, the British conquered Capetown and the Dutch subsequently retreated and made the Great Trek inland, establishing their own provinces. Afrikaaner culture and language then solidified around the Dutch and slave experience. The Afrikaaners, the people of Dutch descent in South Africa, spoke Afrikaans as a first language, and Afrikaans served as a lingua franca between whites and blacks. In the late 1800's a movement emerged to treat Afrikaans as a language in its own right, equal in value to but separate from Dutch. Thereafter Afrikaans gradually replaced Dutch as a written language (Onelis 1993; Sluijs 2013).

Growing Afrikaaner nationalism and opposition to the British by the Dutch Boers (Dutch farmers) resulted in the Boer War, won by the British at the end of the 19th century. In the 20th century English gained significant influence over Afrikaans, replacing the Dutch influence. English became dominant in government, education and industry, but Afrikaans continued primary in the civil and military service. In recent years Afrikaans has received greater recognition in education and government, as apartheid has given way to democratic institutions in South Africa (Donaldson 1993; Ponelis 1993; Sluijs 2013).

There is ongoing controversy among students of the language over whether Afrikaans should be viewed as a dialectal version of Dutch or whether it is the outgrowth of pidginization and subsequent creolization occurring among the slave and black population of South Africa. Those who favor the Dutch explanation attribute Afrikaans' origin to early Cape Dutch, but there has never been laid out a clear path for that evolution. The truth probably lies somewhere in between, such that Afrikaans may be characterized as a semi-creole, giving due credit to the heavy influence of Dutch as the lexifier language, both lexically and syntactically, yet still recognizing the strong influence of its pidgin roots (Donaldson 1993; Sluijs 2013).

5.3.2 Grammar. Afrikaans falls into the class of well developed creoles, as it has a more complex syntactic structure than most creoles and it departs from the typical word order pattern of creoles in general. For example, Afrikaans has SVO and V2 word order (verb second) in a simple main clause (example (1) below), but a VSO word order if an adverb or adverbial phrase is the first element in the clause (examples (2) and (3) below), and a SOV word order in a participial or non-finite clause (example (3) below). Thus, when adverbs appear in first position, as is frequent, the subject is demoted into a post-verbal position in order to maintain V2 word order, as in (2) below. Also, subject-verb inversion occurs in yes/no questions (Donaldson 1993; Ponelis 1993; Sluijs 2013):

(1) *Jan gooi die water weg.*  
 John throw-3SG the water away.  
 'John throws the water away.'

(2) *Daroom gooi Jan die water weg.*  
 Therefore throw-3SG John the water away.  
 'Therefore Jan throws the water away.'

(3) *Ni ver daar-vandaan nie het 'n bobbejaan 'n kind aan-ge-val.*  
 NEG far there-from NEG have-3SG a baboon a child PCL-PTCP-attack.  
 'Not far from there a baboon attacked a child.'

In general Afrikaans verbs do not conjugate or have inflectional endings to indicate agreement or finiteness, but a certain class of verbs forms the past participle by the affixation of the prefix *ge-* to the stem (example (4) below), and the verbs *wees* 'be' and *he* 'have' have suppletive forms, as in English. The modal verbs also have past tense forms. Past participles and non-finite verbs are demoted to the rear of the clause, where they follow the object (examples (4) and (5) below) (Sluijs 2013).

(4) Ek het dit gister gedoen.  
I have-1SG it yesterday PTCP-do.  
'I have done it yesterday.'

(5) Ek wild it doen.  
I want it INFIN-do.  
'I want to do it.'

It is apparent that the position of the subject and object in the sentence depends on the position of the verb.

Nouns in Afrikaans lack grammatical gender, but natural gender exists in the form of feminine suffixes for persons, as in *dosent/dosente* 'male/female lecturer'. Other feminine suffixes exist as well (Donaldson 1993; Sluijs 2013). The definite article is *die* for all nouns and cases and the demonstrative form is *die*. The indefinite article is 'n, which is likewise indeclinable. Thus, the articles give no clue as to the case of the modified noun (Donaldson 1993; Sluijs 2013;).

Nouns do not inflect for case. Inanimate nouns bear a covert gender of masculine, since pronominal reference to them is in the masculine. Generally, the plural of nouns is formed by the addition of either -s or -e, as in *man/mans* 'man/men' and *glas/glase* 'glass/glasses'. The suffix -tjie/-tie acts as diminutive ending, as in *plas/plasie* 'farm/small farm' (Donaldson 1993; Ponelis 1993; Sluijs 2013).

The possessive or genitive case is formed periphrastically using the particle *se*, which follows the possessor and marks the thing possessed, and it is used with both the singular and the plural (example (6) below) (Sluijs 2013):

(6) Piet se motor  
Pete his car.  
'Pete's car'

The possessor may also be independent in a construction with the expanded particle s'n(e) (example 7 below) (Sluijs 2013):

(7) Dis Amanda se ma s'n.  
It-be Amanda her mother hers  
'It's Amanda's mother's'.

Personal and reflexive pronouns and adnominal possessives have a full paradigm, as set forth on Table 5.3.1 below. Note that Afrikaans has a familiar/politeness distinction in the second person singular (Sluijs 2013).

Table 5.3.1 – Afrikaans Personal Pronoun Paradigm

<u>Personal Pronoun Forms</u>					
	<u>Subject</u>	<u>Object</u>	<u>Reflexive</u>	<u>Adnominal Possessive</u>	<u>Pronominal Possessive</u>
1SG	ek	my	my(self)	my	myne
2SG-FAM	jy	jou	jou(self)	jou	joune
2SG-POL	u	u	u(self)	u	u s'n
3SG					
MASC	hy	hom	hom(self)	sy	syne
FEM	sy	haar	haar(self)	haar	hare
NEUT	dit	dit	dit(self)	sy	syne
1PL	ons	ons	ons(self)	ons	ons s'n
2PL	julle	julle	jul(self)	julle/jul	julle s'n
3PL	hulle	hulle	hul(self)	hulle/hul	hulle s'n

So, one says *my huis* ‘my house’ and *die huis is myne* ‘this house is mine.’

As is apparent from Table 5.3.1, personal pronouns for the most part mark a subject-object distinction in the singular, and a gender distinction in the 3rd person singular. The 3rd person plural form, *hulle*, can be used to mark an associative plural, as in *ma-hulle* ‘mother and them/one or more others’ (lit. ‘mother-they’) (Ponelis 1993). Reflexives are marked with the intensifier *-self*, but if the verb is inherently reflexive, the object form can be used without *-self*.

Comparative case is marked with the suffix *-er* and the superlative case with *-ste*, but polysyllabic adjectives mark the comparative and superlative cases periphrastically with *meer* ‘more’ and *meest* ‘most’, similar to English (Sluijs 2013).

Predicate adjectives are never inflected, but many if not most adjectives in an attributive role have *-e/-te* as a suffix. These endings apply to both the singular and plural of the modified nouns, whether with a definite or indefinite article. Therefore, these endings provide no usable information regarding the case of the nouns they modify. Predicate adjectives precede the nouns they modify (Sluijs 2013).

Since Afrikaans verbs have a past participle, it is not surprising that Afrikaans has a passive voice, which is formed with *word* ‘become’ in the present and *is* (the present tense of *wees* ‘to be’) in the past. The agent is marked by *deur* ‘by’. See examples (8) and (9) below (Donaldson 1993).

- (8) Die boek word deur die hele klas gelees.  
 The book is (being) by the whole class PTCP-read.  
 ‘The book is (being) read by the whole class.’

- (9) Die boek is gelees.  
 The book was (being) PTCP-read.  
 ‘The book was (being) read.’

As was mentioned previously, other than pronouns in the singular, nominal direct objects are generally not marked. However, there is increasing use of the preposition *vir* to mark direct objects, especially if animate (see example (10) below). *Vir* is more particularly used to mark indirect objects (see example (11) below) (Donaldson 1993; Sluijs 2013).

- (10) Hy het vir my geslaan.  
 He 3SG-PRES-have to me PTCP-hit.  
 ‘He has hit me.’

- (11) Hy het dit vir my gegee.  
 He 3SG-PRES-have it to me PTCP-give.  
 ‘He gave it to me.’

*vir* also marks *wat* ‘who/what’ as the subject of a relative clause when it is inserted before the direct object, as in example (12) below (Donaldson 1993), with auxiliary verb inversion in the relative clause:

- (12) ...Piet wat vir Jan vermoor het.  
 ...Pete who to John PTCP-murder 3SG-PRES-have.  
 ‘...Pete who has murdered John.’  
 rather than ‘...Pete who John murdered.’

In summary, Afrikaans has a partially developed case structure, particularly with pronouns, which have a richly developed paradigm. The particle *se* marks the possessive case. Afrikaans has a way of marking the direct and indirect object with the preposition *vir*. The subject and object are also marked positionally with respect to the verb by reason of the application of the V2 rule and whether an adverbial element appears first in the sentence. Since verbs have a participial form which demotes them to final position, this also affects where the subject and object occur. The use of the passive voice, marked by the verbs *word* and *wees* and the preposition *deur*, also provides information about subject and object distribution. Otherwise, verbs do not inflect, nouns generally lack inflectional endings except for natural gender and pluralization, attributive adjectives take a uniform ending, and articles are indeclinable, resulting in no developed system of agreement as such. In short, word order is the most important determiner of grammatical relations, along with use of the preposition *vir*, the particle *se*, the past participle, and the personal pronouns forms.



## 5.4 Cape Verdean Creole

5.4.1 Background. Cape Verde consists of a chain of nine inhabited islands in the Atlantic off the coast of Senegal in northwest Africa. The creole spoken on the largest island, Santiago, is the native language of most of its inhabitants, and there are hundreds of thousands of speakers of Cape Verdean Creole (CV Creole) in the diaspora, with several varieties of creole spoken on the adjacent islands (Lang 2013).

Santiago was the first island to be settled by whites around 1460, mostly by Portuguese, and it became a strategic port of call for Portuguese maritime trading purposes. However, the climate and geography did not favor typical European colonization of the islands. A different economy developed which included the importation of African slaves from dozens of different ethnic groups. The preponderance of blacks in relation to whites (7:1 in 1582) resulted in a high degree of mixing between blacks and whites. Over time a society of whites, mulattos, slaves and emancipated slaves, arose, with blurred social boundaries and a levelling between rich and poor, town and country. This levelling had linguistic impact as well, favoring the more rural basilectal varieties of CV Creole (Baptista 2002; Lang 2013).

Portuguese domination of the region gave way to English, French and Dutch colonization of West Africa in succeeding centuries, but a Portuguese based creole was well established in Cape Verde at that point. CV Creole is closely related to the creole spoken in Guinea-Bissau because of the high degree of linguistic transmission between the islands and the coastal societies of Africa. The exact origin of CV Creole is controversial, with hypotheses in support of Portugal, Guinea and Cape Verde as the source. In any event, there was a high degree of commercial and social intercourse by blacks, both freed and slaves, and their intermediaries, between and among those three places (Baptista 2002; Lang 2013).

It seems clear that the development of CV Creole involved both children born on the islands and adults in the process of L1 and L2 linguistic acquisition over a period of at least a century, with contributions from Portuguese dialects as well as African substrates. Although Portuguese is the only official language of Cape Verde today, the local population, estimated at half a million people, speaks CV Creole as their first language, and efforts are underway to make CV Creole also an official language. Only recently an official writing system has been recognized, and CV Creole is making inroads into government, education and the media. In

effect, Portuguese and CV Creole function together as a system of diglossia (Baptista 2002; Lang 2013).

5.4.2 Grammar. No morphological case or gender distinctions exist in noun phrases except for natural gender of animates, as illustrated by *figju/fidja* ‘son-child’/‘daughter’, and *badjador/badjadera* ‘male dancer’/‘female dancer’. Natural gender may also be marked by adding *femia* (f.) or *matxu* (m.) to *fidju* ‘child’ (Baptista 2002; Lang 2013).

Adjectives inflect for agreement with the head noun if it is [+human], as in *un minimu/a bunitu/a* ‘a handsome/beautiful boy/girl’, or *nhas fidju* ‘my children’. The default unmarked form is masculine with respect to nouns that do not bear natural gender (Baptista 2002; Lang 2013).

Pluralization of nouns is generally not marked where the plural information is carried by the article, the demonstrative, the possessive adjective, by a quantifier, or by a number. Otherwise, the plural of nouns is signalled by the suffix -s or -is. Examples with the possessive adjective and a numerical specification are: *un rapariga* ‘a young woman’ and *uns rapariga* ‘some young women’; *oitu fidju* ‘eight children’. Bare nouns, especially in the context of definiteness or animacy, are the best candidates for the plural ending, as in: *nha povus* ‘my people’. Indefinite and definite articles inflect for number but not gender: *un/uns* ‘one/some’ and *kel/kes* ‘the’. *Kel/kes* also acts as a demonstrative ‘this/these’ (Baptista 2002; Lang 2013).

Comparative constructions are marked by *mas \_\_\_ (di) ki* ‘more \_\_\_ than’. Equative constructions are marked by *sima* ‘same as’ (Baptista 2002; Lang 2013).

There is a considerable diversity of case forms in the CV Creole pronoun paradigm, which differentiates between clitics and nonclitics, as shown in Tables 5.4.1 and 5.4.2 (Baptista 2002).

Table 5.4.1 – Cape Verdean Clitic Pronouns

	Subject	Object	Prepositional
1st sg	N*	-m	NA
2nd sg	bu	-bu/-u	
2nd formal	nho/nha	-nho/-nha	
3rd sg	e	-(e)l	
1st pl	nu	-nu	
2nd pl	nhos	-nhos	
3rd pl	es	-(e)s	

\*capitalized, as in English

Table 5.4.2 – Cape Verdean Nonclitic Pronouns

	Nonprepositional	Prepositional
1st sg	mi/ami	mi
2nd sg	bo/abo nho/nha (formal) anho/anha	bo nho/nha
3rd sg	el/ael	el
1st pl	nos/anos	nos
2nd pl	nhos/anhos	nhos
3rd pl	es/aes	es

The position of subject clitics is structurally determined in that they immediately precede the verb or the TMA or Neg marker. The object clitic is mandatorily attached to the verb. Examples 1 and 2 below show both forms, with the direct object clitic in example (1) and the indirect object clitic in example (2), interpreted as accusative and dative, respectively (Baptista 2002).

- (1) *N ta favora-l dretu.*  
 I TMA favor-him well.  
 ‘I favor him a lot.’
- (2) *E da-m kudjer riba di kama.*  
 She give-me spoon on top of bed.  
 ‘She fed me when I was in bed.’

Monosyllabic nonclitics (such as *mi*) and bisyllabic nonclitics (such as *ami*) of the nonprepositional form can be used in all subject positions, sometimes appearing with subject clitics as well, as in example (3) below. Nonclitic subjects are often topicalized or appear in cleft constructions. Nonclitics as subjects appear to be used for special emphasis.

- (3) *Ami’ N ten sinku fidju.*  
 NONCL CL have five children.  
 ‘I have five children.’

Nonclitics as objects are prepositionalized and cannot appear by themselves immediately adjacent to the verb unless the verb is inflected with the anterior tense marker *-ba*, as in examples (4) and (5) below, but they can appear in combination with clitics, as in example (7) below (Baptista 2002).

- (4) *Dj’ es ka fika ku mi.*  
 PERF they NEG stay with NONCL.  
 ‘They did not stay with me.’

- (5) *Nha xefri dja fraba mi.*  
 My leader PERF tell+ANT NONCL.  
 ‘My leader told me so.’

Possessive adjectives and possessive pronouns have full paradigms of their own, but sometimes use a periphrastic form, as in *bu* ‘your’ and *nos* ‘our’, or *di bo* ‘of yours’ and *di nos* ‘of ours’ (Baptista 2002).

Reflexives are marked with the use of a body part, *kabesa* ‘head’, as in example (6) below, or sometimes by affixing *-me* to a nonclitic, as in *mi-me* ‘myself’ and *bo-me* ‘yourself’, and so on. Reciprocity is marked with the term for comrade, *kunpanheru* (Baptista 2002).

- (6) *No(s) ta trata no(s) kabesa.*  
 We TMA treat our head.  
 ‘We take care of ourselves.’

CV Creole follows the conventional SVO word order. Verbs exhibit no person or number variation and no subject verb agreement. The indirect object must precede the direct object in a double object construction following the verb, for which there is no prepositional variant. See example (7) below, which also illustrates a clitic-nonclitic combination (Baptista 2002).

- (7) *Deus da- m- el.*  
 God give-me-it.  
 ‘God gave it to me.’

Subject verb inversion does not occur with questions, whether yes/no questions or wh- questions, but questions are marked with rising intonation and question words are fronted and inversion can occur when a sentence begins with an adverbial adjunct clause (Baptista 2002; Lang 2013).

There is a passive construction which is marked by *-du* affixed to the verb stem, both to avoid the use of an agent and in impersonal constructions, as in examples (8) and (9) below (Baptista 2002; Lang 2013).

- (8) *Bonba ta dadu dentu di kaza.*  
 Spray TMA PASS-given inside of house.  
 ‘The house was sprayed.’

- (9) *Ta fladu.*  
 TMA PASS-said  
 ‘It is said.’

In CV Creole prepositions are used to mark the instrumentality of an NP, its location, temporal role, and whatever other role the NP may play in a sentence, as in other languages.

Specific prepositions mark specific roles of course. Particular mention is made of *riba (di)* ‘above, on, on top of’, *baxu (di)* ‘under’, and *na* ‘on, at, to’ (Baptista 2002). Example (2) is repeated here as example (10) by way of illustration, with *riba di* as a locative preposition:

- (10) *E da-m kudjer riba di kama.*  
She give-me spoon on top of bed.  
‘She fed me when I was in bed.’

When the object of a preposition is a personal pronoun, as previously noted, it will be a nonclitic.

In summary, CV Creole lacks inflectional case marking on nominals except for natural gender of animates and a number of ways of marking pluralization. To some extent there is agreement between adjectives and animate nouns. CV Creole does have an extensive case marking system for pronominals, including possessive pronouns and possessive adjectives (determiners) with a distinction between clitic and nonclitic pronouns. The position of these pronouns is structurally determined. Reflexives and reciprocals have a distinctive marking. Verbs lack person and number variation. Word order is SVO, and except in certain tense constructions there is a rigid indirect object, direct object word order following the verb. The passive construction exists and is marked by the verbal suffix *-du*.

## 5.5 Sango

5.5.1 Background. Sango is a lingua franca of the Central African Republic (CAF), one of only a few indigenous African lingua francas. It and French are the two official languages of the CAF. French is the language of education and government, the prestige social and economic language, and is a written language. The writing of Sango has not been standardized, except in certain religious texts. For example, Baptist missionaries translated scripture into Sango in the early 20th century. The government did adopt an official orthography in 1984 (Samarin 2013; Samarin 1967).

Despite the importance of French for economic and social advancement, Sango is the popular vernacular of the people, spoken by about three million persons. For many it is a second language after their separate tribal languages, but for an increasing number of young people it is their first language (Samarin 2013; Samarin 1967).

Sango traces its origin as a pidgin to around 1880-1900. It arose out of the Ngbandi dialects as they came into contact with other tribal languages and spread from the upper Ubangi River in the south through the rest of the country, thereafter creolizing into modern-day Sango.

In 1964 it was declared by the government to be the official national language. Ngbandi is the major lexifier language, but French and more recently English have both been exerting a growing influence. Sango has a limited vocabulary and most words contributed by Ngbandi are only one or two syllables in length. French has contributed the most foreign words. Because of the influence of French and English, the poverty of the country and its political instability, Sango is at some risk of not surviving as a language (Samarin 2013; Samarin 1967).

5.5.2 Grammar. Little has been written about the grammar of Sango. Samarin's (1967) grammar text is based on an inductive analysis of a corpus of tape recorded conversations and letters and is probably the definitive work of its kind to date. The French lexical influence is very apparent. Sango, like many creoles, has almost no inflection of any kind, and its syntax depends on the distributional and functional aspects of words and phrases (Samarin 2013; Samarin 1967).

Word order in Sango is SVO. The only verbal inflection seen is the affixation of *a-* as a predicate marker to mark the position of the immediately preceding noun or noun phrase as the subject, but never to mark a subject pronoun, as in examples (1) and (2) below. There is no passive form (Samarin 2013; Samarin 1967):

- (1) Koli     ti mbi na     a-ke     nzoni zo     ape.  
 Husband of me DEF     PRED-is good person NEG.  
 'My husband is not a good person.'
- (2) Lo leke     akungba     ti lo.  
 She prepared belongings of her.  
 'She gathered up all her belongings.'

The *a-* often acts like the pronoun 'it' in English, such that the phrase lacks an overt grammatical subject. Examples (3) and (4) below illustrate that usage with comparative and superlative verb forms (Samarin 2013):

- (3) a-hon 'it surpasses'  
 (4) a-lingbi ape 'it has no equal'

Sango also has a causative verb *sara* 'do, make', as in: *sara inon* 'make urine [urinate]'. This can be compared with the *do*-support verb form in English in some of its usages (Samarin 2013).

The object immediately follows the verb. When the verb is ditransitive, the indirect object is marked by the preposition *na*. The position of the direct and indirect object can be optionally reversed, but *na* will mark the indirect object. See examples (5) and (6) below (Samarin 2013):

- (5) Ala hunda na mbi ngingza ti nze.  
 They ask OBL me money of month.  
 ‘They asked me for the month’s wages.’
- (6) Ala hunda ngingza ti nze na mbi.  
 They ask money of month OBL me.  
 ‘They asked the month’s wages of me.’

*Na* is in fact a very common preposition in conjunction with a NP to mark place, direction, time, instrumentality, possession, and benefaction. *Na*, meaning ‘and’, also coordinates and connects clauses (Samarin 1967).

The yes-no form of interrogative does not involve a subject-verb inversion but either an intonation or the question marker *eski/esi*, as in the French *est-ce que*. See examples (7) and (8) below (Samarin 2013):

- (7) Mo eke?  
 You are?  
 ‘Are you there?’
- (8) Eski mo hinga ala?  
 Is it that you know them?  
 ‘Do you know them?’

A verb or an entire verb phrase can be nominalized by the suffixation of *-ngo*, as in: *te* ‘eat’ and *tengo* ‘eating’, which functions like the English gerund. There is no past participle and there is no passive voice (Samarin 2013; Samarin 1967).

Nouns have no case forms but form plurals, mostly with animate nouns, by the affixation of *a-*, as in: *a-wali* ‘women’ and *a-koli* ‘men’, unless the plural sense is inherent. They also have a way of indicating natural gender by using the word for man or woman, as in: *melenge ti koli* ‘child of man/son/young man’ and *melenge ti wali* ‘child of woman/daughter/young woman’. The word *ti* functions as a connective, meaning ‘of, to’, in order to relate a modifier to the head noun in NP’s and VP’s, as in the examples just cited. It can also be used to indicate possession. In fact, it is the most commonly used word in Sango. See examples (9) and (10) below (Samarin 2013):

- (9) *nzara ti zo*  
 hunger of/for person  
 ‘desire for human flesh’
- (10) *koli ti mbi*  
 man of me  
 ‘my husband’

A further use of *ti* is between two verbs, V + *ti* + V, to form a string or serial verb construction. In a subordinate clause headed by *ti*, the implied subject is the same as that of the matrix clause. *Ti* + V can indicate intention or purpose, much like ‘to’ in the English infinitive. And *yi ti* + subject pronoun is an intensifier of the subject, as in (underlined): *lo goe / yi ti lo / na gala* ‘he went / as for him ‘ to market’ (Samarin 1967; Samarin 2013).

Personal pronouns used in direct discourse vary according to person in the singular, but only in the first person in the plural; when used in indirect discourse, they vary only according to singular and plural usage (Samarin 1967). See Table 5.5.1 below:

Table 5.5.1 – Sango Personal Pronouns

	Direct Discourse - Subject/Object	Indirect Discourse Subject/Object
1SG	mbi/mi	ni
2SG	mo/me	ni
3SG	lo	ni
1PL	e/i	ani
2PL	ala/aa	ani
3PL	ala/aa	ani
INDF	mbeni	

As noted, there is no distinction between subject and object forms. As the table shows, however, there is a distinction between direct discourse and indirect (or logophoric) discourse. The plural form is sometimes used as a mark of respect, and plural pronouns are sometimes used resumptively when singular pronouns are coordinated. See example (11) below (Samarin 2013):

- (11) *Laso mbi na lo, i ke gwe biani.*  
 Today I and he, we COP go truly.  
 ‘Today he and I will go for sure.’

The reflexive and reciprocal forms of pronoun are marked by the use of *tere* ‘body’ and *ti*. For example:

- (12) *Lo sukula tere ti ni.*  
 He/she washed body of self.  
 ‘He/she washed him/herself.’

The pronoun *lo* is also used for inanimate objects. *So* can mark a relative clause, with a meaning sometimes like ‘thus’. And the construction *lo so* marks something as just mentioned or about to be mentioned. See example (13) below (Samarin 1967), where *lo* is used in both its senses:

- (13) *Ere ti ala so lo mu ala lo so.*  
 Names of them whom he chose them  
 ‘The names of those whom he chose are the following.’



Adjectives can precede or follow nouns and can form compounds with nouns, as in *mama-kete* ‘mother-small’ [aunt, mother’s younger sister]. They carry the plural prefix *a-* when modifying a plural noun, and in this respect are a form of agreement. See example (14) below (Samarin 2013):

- (14) *a-kete a-melenge ti a-kondo*  
PL-small PL-child of PL-chicken  
‘small chicks’

In summary, Sango follows the creole pattern of SVO word order. Verbs do not conjugate. The affix *a-* is used as a predicate marker to indicate the verb and the immediately preceding subject (other than a personal pronoun). The direct and indirect objects immediately follow the verb. The preposition *na* marks the indirect object. Thus, subjects and objects are marked not by inflection but by verbal affixation or by a preposition. Nouns have no case forms, but animate nouns pluralize by affixing *a-*. The preposition *ti* marks possession. *ti* is also used to connect a modifier with its head noun. Personal pronouns have a partially developed paradigm, but there is no distinction between subject and object forms. The reflexive is marked by the use of *ti* and by *tere*, the word for body. Adjectives in the plural take *a-* as an affix in agreement with the nouns they modify. It is evident that Sango uses the affix *a-*, prepositions like *ti* and *na*, the connective *so*, direct and indirect discourse, and word order, to establish basic grammatical relations.

## Chapter 6 Signed Language Creole Studies

### 6.1 Modalities of signed language

A reason for studying signed languages alongside creoles is that both involve a disjunction between the input of ancestral languages and the language actually acquired. The disjunction between ancestral languages and creoles has been explored above, and that disjunction will become more evident with signed languages. It is in fact true that the vast majority (over 90 percent) of deaf-at-birth (Deaf) children are required to learn a language that is not the language of their hearing parents (Kegl 2008). The existence of that disjunction is what gives substance to the argument that linguistic universals are to a greater or lesser extent filling the gap. Moreover, it is essential to the argument to recognize that signed languages are not merely gestural or artificial sign systems, such as are used by Deaf persons to communicate with hearing persons, but are natural languages in their own right (Neidle et al. 2000; Kegl 2008).

One type of disjunction in signed languages is the difference in modality. The most obvious difference in modality between signed and spoken languages is the fact that signed languages are visual rather than aural. There are other modality-specific differences as well, discussed below. Nevertheless, it is also true that the same fundamental principles which govern spoken languages also govern signed languages. For example, signed languages have been shown to exhibit the same hierarchical clause structure, with lexical and functional projections, as spoken languages (Neidle et al. 2000).

It is easily observed that manual signing is the primary modality of signed languages, but it is less well understood that crucial syntactic information can be expressed nonmanually, that is, by specific movements or expressions of the head, face, eyes and upper body. It is particularly interesting to note that there are two types of facial expressions, those that are purely affective (emotional), which originate in the right side of the brain, and those that are linguistic in nature, which originate in the left side or language side of the brain (Neidle et al. 2000:40). Also, nonmanual signing usually occurs at the same time as and in coordination with manual signing rather than sequentially, thus providing at least two channels for the simultaneous expression of information. Whereas spoken creoles favor an isolating type of morphology, signed languages prefer to include more information in a single sign, simultaneously nesting that information through multiple channels in an agglutinative fashion rather than linearly. The processing of information through multiple channels overcomes to some extent the relative slowness of

working at the same time with different, slower articulators (hands, arms and body rather than the tongue) (Neidle et al. 2000; Kegl 2008).

The phonemes of signed language consist of handshape, hand orientation, the placement of the hand relative to the body, and movement. These phonemes can be coarticulated, thus forming a morpheme. Morphemes may also be coarticulated to express morphological inflection by changes to the root sign (Neidle et al. 2000).

There is no 1-to-1 correspondence of signed language with English. This makes glossing a sign difficult, since there is often not adequate notation to capture the internal phonological and morphological structure of the sign. Some use of diacritics is helpful but limited in conveying aspectual and agreement inflection (Neidle et al. 2000).

## 6.2 American Sign Language

6.2.1 Background. The first school for the Deaf in America was established in Hartford, Connecticut, in 1817 by Thomas Hopkins Gallaudet and Laurent Clerc, using a hybrid methodical sign system adapted from French Sign Language (FSL), then a full-fledged natural language. Students from different parts of the country who attended the school brought with them their own local signs, and it is believed that the methodical sign system of FSL together with the various local signs formed American Sign Language (ASL) (Kegl 2008).

However, ASL is demonstrably distinct from FSL and not merely a relexified version of FSL. It has been argued that FSL was the superstrate language of ASL and the various sign systems of the first students were the substrate languages that led to the creolization of ASL. Kegl (2008:497) argues that FSL was not the model for ASL or the superstrate but just one more language in the mix, and that the signs brought by the students were more gestural, homesign systems than anything approaching a natural substrate language. Instead, the artificial system of methodical signs first relexified spoken French and then spoken English with manual signs taken from FSL, and the resulting hybrid served as the signed superstrate (as opposed to the lexifier) for what is termed Old ASL, rather than the socially dominant spoken French and English serving as the superstrate.

In the course of events, relexified methodical signing was soon abandoned in favor of a form of natural signing which arguably had already begun to arise in the Deaf community at the school. The SOV word order of FSL was changed into SVO in ASL. Other changes occurred

showing that ASL was developing independent of FSL and was also not just an English language version of FSL. ASL has continued to evolve and change diachronically consistent with all natural languages (Kegl 2008).

6.2.2 Grammar. As mentioned, the unmarked word order in ASL is SVO. Claims have been made that ASL has free word order, but when topical constructions, tag questions and pronominal right dislocations are taken into consideration as moving various arguments and NPs outside of the actual complementizer clause (CP), the evidence supports the conclusion that SVO is the underlying word order of the CP (Neidle et al. 2000).

ASL is three dimensional in its use of space to represent referents and to express movement, a modality which is common to all signed languages. For example, a person or thing being talked about may be assigned a specific location in space (e.g. to the left of the speaker) and thereafter pointing to that location will constitute a reference to that person or thing. This constitutes an overt instantiation of the  $\phi$ -feature of person. Thus, reference to first person is made by the signer pointing to his or her body, and to second or third person by pointing to the designated location in space, or to the person him/herself if physically present. The locations are established at the outset in the discourse. Pronominal reference is thus unambiguous, and person and number are established (Kegl 1999; Neidle et al. 2000).

Essential to the success of pointing is the establishment in space at the outset of persons and things, adequately described or identified. Proper names are usually fingerspelled. The use of classifiers for nouns and verbs is universal in signed languages. Noun classifiers are described according to their size and shape (SASS or size and shape specifiers), with specific modifiers as needed (for color, texture, number, etc.). Other signs are used to indicate more abstract concepts, such as pointing to the forehead for 'thought'. Verbal classifiers consist of object classifiers (based on physical characteristics) and handling classifiers (by the way an object is handled), which involve co-articulation of the object concurrently with verbal movement. The object in this situation (the thing that moves or is located) is the theme of the sentence. (Kegl 1999; Neidle et al. 2000).

There is considerable agreement morphology in ASL. Manual reference to spatial locations of referents is used to express subject and non-theme object (goal) agreement on 'person-agreeing' verbs (as opposed to 'plain' or 'nonagreeing' verbs and locative or motion verbs, see below). For example, the person-agreeing verb 'give' is expressed by movement of the

extended right arm between the spatial locations associated with the subject and the indirect object, glossed as follows:

- (1) JOHN<sub>i</sub> ;GIVE<sub>j</sub> MARY<sub>j</sub> BOOK.  
'John gives Mary a book.'

In this example, there is a manual subject agreement prefix and a manual indirect object agreement suffix, which correlates with the person and number features of the two arguments (Neidle et al. 2000; Kegl 1999). The verb agrees with 'John' and 'Mary', not with 'book'. The direct object 'book' is signed and indexed for reference and can appear initially as a topic, or at the end of the clause, or even be incorporated into the verb. There is no attempt to have the verb and the direct object agree in this sentence (Neidle et al. 2000).

When definiteness is desired, the determiner is the index finger, which points to the relevant location in space. Indefiniteness is associated with an area rather than a point in space. Thus, if the indirect object is indefinite, the fingers and thumb, usually closed, will open and the fingers will spread as the verb approaches the location of the object. See example (2) below (Neidle et al. 2000).

- (2) JOHN<sub>i</sub> ;GIVE<sub>indef</sub> SOMEONE BOOK.  
'John gives someone a book.'

The use of spatial locations allows for reference to any number of persons, previously identified by spatial location, which provides greater expressive power than the traditional distinctions between first, second and third person. Manual pointing is sometimes also accompanied by the nonmanual signs eye gaze and head tilt inclined towards the same locations. Possession is indicated by an open palm pointing to and facing the possessor. Reflexives/emphatics are articulated with a closed fist, thumb up, such that the pad of the thumb points to and faces the intended referent. There is no separate paradigm as such for pronouns in their various forms, just a designated spatial location and marking with various kinds of pointing (Neidle et al. 2000).

Spatial location can also refer to places as well as things, and a manually signed locative or motion verb, such as 'drive', will refer to the points in space, previously established, where motion originates and ends. Reference will not be made by such a verb to the subject and therefore there will be no spatial agreement with the subject, but the concept of motion ('drive from/to') is incorporated into the verb applicatively (Kegl 1999).

So-called ‘plain’ or ‘nonagreeing’ verbs (verbs of emotion, cognition and perception) do not use manual (morphological) agreement signs but they use nonmanual signs, such as head tilt and eye gaze, to express agreement with abstract syntactic features located in the heads of functional projections. The presentation of ASL in Neidle et al. (2000) is based on a syntactic tree structure with separate functional projections for AgrS and AgrO, in that hierarchical order. A basic transitive sentence with the nonagreeing verb ‘love’ would be signed as shown in example (3) below. The fact of nonmanual signing of subject and object as well as manual (morphological) signing of subject and object constitutes evidence for the duality of lexical and functional marking argued for by Neidle et al. (2000). It would be an oversimplification, but perhaps a helpful one, to say that the hands convey content words and the nonmanual signs convey syntax, as some 80% of the functional grammatical marking of ASL is nonmanual (Kegl 2008).

$\frac{\text{head tilt}_i}{\text{eye gaze}_j}$

(3) JOHN<sub>i</sub> [+agr<sub>i</sub>]<sub>AgrS</sub> [+agr<sub>j</sub>]<sub>AgrO</sub> LOVE MARY<sub>j</sub>  
 ‘John loves Mary.’

In other words, head tilt, which is in the direction of the subject, begins before eye gaze and marks the subject, and eye gaze, which is in the direction of the object, marks the object. The above example shows how head tilt and eye gaze are associated with the functional heads in the AgrS and AgrO projections, respectively, and how they spread over their respective c-command domains. Further, by analogy with manual signing, definiteness or indefiniteness of the object can be signaled by a focused eye gaze or a wandering eye gaze. And if a verb is intransitive, either eye gaze or head tilt or both may be used to mark the subject (Neidle et al. 2000).

ASL can also license null subjects and objects through the use of nonmanual marking of agreement. Example (3) above can be restated without an overt subject or an overt object as follows in examples (4) and (5) (Neidle et al. 2000):

$\frac{\text{head tilt}_i}{\text{eye gaze}_j}$

(4) pro<sub>i</sub> [+agr<sub>i</sub>]<sub>AgrS</sub> [+agr<sub>j</sub>]<sub>AgrO</sub> LOVE MARY<sub>j</sub>  
 ‘(He/she) loves Mary.’

$\frac{\text{eye gaze}_j}{\text{head tilt}_i}$

(5) JOHN<sub>i</sub> [+agr<sub>i</sub>]<sub>AgrS</sub> [+agr<sub>j</sub>]<sub>AgrO</sub> LOVE pro<sub>j</sub>  
 ‘John loves (him/her).’

Determiners in ASL are both definite and indefinite. The definite sign is made by pointing with the index finger preminally to a definite area of space, thereby expressing agreement with the referent. Postnominally the index sign functions like a locative adverbial. Without a nominal, the definite determiner can function as a pronoun. IX is the gloss for an index sign. See examples (6), (7) and (8) (Neidle et al. 2000).

(6) [IX<sub>det</sub> BOY]<sub>DP</sub> LIKE CHOCOLATE  
 ‘The boy likes chocolate.’

(7) JOHN LIVE IX<sub>adv</sub>  
 ‘John lives there.’

(8) IX<sub>det</sub> LIKE CHOCOLATE  
 ‘He/she likes chocolate.’

The indefinite determiner is signed with the palm facing inward toward the body and the index finger pointing upward, accompanied by the nonmanual signs of a furrowed brow, a wrinkled nose and/or a tremoring of the hand, all of varying degrees of intensity (Neidle et al. 2000).

Possessive determiner phrases (DPs) pattern in the same manner as transitive clauses and nonpossessive DPs pattern in the same manner as intransitive clauses, using both manual and nonmanual agreement markers. Differences depend on the definiteness of the nominal being agreed with. In possessive DPs, head tilt expresses agreement with the possessor and eye gaze expresses agreement with the possessee. See example (9) below (Neidle et al. 2000).

\_\_\_\_\_ head tilt;  
                   \_\_\_\_\_ eye gaze;  
 (9) JOHN<sub>i</sub> POSS<sub>i</sub> OLD HOUSE<sub>j</sub> SOLD YESTERDAY.  
 ‘John’s old house sold yesterday.’

In summary, ASL uses SVO as the default word order. Objects and topics are signed in a way that indicates person and number and that does not need to distinguish between the referent itself and a pronominal reference. ASL even allows for null subject and object reference by use of agreement. ASL relies heavily on agreement between the verb and the DP (or NP) as signified by nonmanual signs to mark the subject and object, possessor and possessee. The distribution, spread, intensity, and perseveration of nonmanual signs provide evidence for the complex syntactic structure inside a CP which includes projections for AgrS and AgrO.

### 6.3 Nicaraguan Sign Language

6.3.1 Background. Nicaraguan sign language (NSL, or Idioma de Senas de Nicaragua), is unique among known sign languages. It originated in a school for the Deaf organized in Managua, Nicaragua, in the 1980's, as part of the government's effort to provide a minimal education for all children, including the disabled. The students who attended, ages 4 to 16, some four hundred by 1983, came from homes with hearing parents, each student having his or her own limited home sign system of gestures. No community of the Deaf existed as such in Nicaragua and these children were isolated from any communication with other Deaf children prior to entering the school (Kegl 2017; Kegl 2008; Senghas et al. 2004; Senghas & Coppola 2001; Kegl et al. 1999).

Teachers at first attempted to teach the children to lip-read and to speak Spanish, but without success. Absent a common language, on their own outside of class the children began to forge a rudimentary sign language for mutual communication, a peer group pidgin, but without having the benefit of an existing sign language as a model. Lacking the auditory channel, they knew no Spanish and therefore Spanish was not available as a lexifier language. Their home sign gestural systems did not amount to full-fledged natural languages, so they did not have full substrate languages to call upon either. In essence, NSL was born as a natural language without true lexifier or substrate influences (Kegl 2017; Kegl 2008; Senghas et al. 2004; Senghas & Coppola 2001; Kegl et al. 1999).

Each year new students arrived and the student body grew in size. The new students learned the sign system that was in use at the time and the youngest among them improved upon it. The sign language was at first not yet fully formed but by the early 1990's it had become a full-fledged natural language in its own right, due to the innovations and creativity of the children who were still in the so-called critical or sensitive period of life for language acquisition (ages 4 to 10, approximately). The most fluent users and pioneers of the emerging sign language were the most recent and youngest arrivals, relying on their innate linguistic expectations in response to the impoverished input of the pidgin sign language of the older children, no better input being available. Nativization of language was occurring in the Bickertonian sense. Ironically, the older children began to copy the younger children to the extent they could, rather than the other way around. The young children came up with their own generalizations, which then became the prototype. The older students at the school, who were past the critical period as



NSL was developing, were locked in to the more pidgin-like form of the sign language that first came into being (Kegl 2017; Kegl 2008; Senghas et al. 2004; Senghas & Coppola 2001; Kegl et al. 1999).

It was in 1986 that MIT linguist Judy Kegl, at the invitation of the Nicaraguan government, came to the school to investigate this phenomenon of a sign language that was mysteriously appearing on its own, without adult intervention. She was present during the birth process of NSL. Eventually the government accepted this new reality, embraced it, and went countrywide with it (Kegl 2017; Kegl 2008; Senghas et al. 2004; Senghas & Coppola 2001; Kegl et al. 1999).

6.3.2 Grammar. NSL uses SVO word order for plain verb constructions. It makes a distinction between (i) plain verbs, such as occur in simple sentences, (ii) spatial verbs, which involve three dimensional movement or location and which may be one of three classes: directional, locative or orientational (this distinction is similar but not identical to the distinction in verbs made by ASL), and (iii) inflecting verbs (Kegl 2017).

The word order changes to OSV in spatial verbs, or even SOV, because of the requirement to specify the ‘ground’ before the moving figure in a spatial verb. By ground is meant the thing that is immovable, or grounded, or that is the end point, in the movement sequence being signed – in a sense, the background. For example, in a sentence like ‘the boy is climbing a tree’, the tree is the fixed grammatical object being climbed and is the ground. It must be put in place before the action of climbing is signed, it is usually signed with the left hand, and it remains stationary during the action part of the signing by the right hand (unless both hands are needed for the next sign). The subject, the boy, must also be signed before the action. Thus, the object and the subject precede the verb and OSV word order results. Alternatively, but less frequently, the boy could be signed first and then the tree, resulting in SOV word order, but in either situation both need to be signed in order for the verb to be able to incorporate them into the action. The action of the verb is then tracked or followed by the eyes in what is called ‘smooth pursuit’ (Kegl 2017).

Integral to understanding how NSL verbs work is the concept of classifiers, previously described in the discussion of ASL. First, the signer makes a sign for some type of person or thing and then proceeds to use classifier hand shapes to more particularly indicate its size, shape, and appearance. The classifier relates back to the person or thing originally signed as an

antecedent noun and is incorporated into the verb that shows where it is and/or how it moves. The original sign may also be so unique as to constitute a classifier in itself, such as the sign for an airplane. The ground classifier has a special role, in that it does not function as a separate or independent sign but as a clitic attached to the verb. But in the sentence referred to above, ‘the boy is climbing (or climbs) the tree’, it was necessary to create two grammatical objects, the boy and the tree, and park them so to speak at the beginning of the sentence for subsequent use by the verb (Kegl 2017). The signs made for nouns do not change, or inflect, for the various case positions which they assume in the sentence.

The structure of locative and directional verbs is applicative, meaning that what would otherwise appear as a prepositional phrase in other languages is directly incorporated into the verb. In other words, NSL does not use prepositions (or postpositions). Spatial verbs that show direction of movement also show the source location, the goal location, or both, which are typically expressed with prepositions such as ‘from’ and ‘to’, but the NSL verb captures both the source and the goal as it moves from one previously signed location to another. Thus, in ‘I go by taxi from my house to school’, the right arm moves from left to right, from house to school, the sign for ‘house’ having already been made to the signer’s left and the sign for ‘school’ to the signer’s right. ‘I go by taxi’ requires some additional signing as a separate clause to indicate the means of going, first signing ‘taxi’ as the object and ground and ‘I’ as the subject, and ‘get into’ as the verb, followed by the signing motion for ‘go’ (Kegl 2017).

A locative verb shows only location, not movement, but is still spatial, and incorporates the concepts of ‘at’, ‘on’, ‘over’, ‘under’, and so forth. For example, the sentence ‘the cup is on the table’ offers no explanation of how the cup got there, only that it is there, and the English copulative verb ‘to be’ is used. But the NSL verb concept is ‘be on’, which is omitted as unnecessary. The sign for ‘table’ is the ground, and the sign for ‘cup’ is a handling classifier, a kind of classifier that describes how the cup is held and handled. Since there is no movement, eye gaze focused on the table is crucial to establishing the location of the cup (Kegl 2017).

Some locative verbs in NSL utilize what is called ‘body incorporation’. For example, the sign for pain is made by opening and closing the right fist and placing it where the pain is occurring, such as the head or stomach, plus an optional grimace. In effect, this works as a compound locative sign, no verb being necessary (Kegl 2017).

Oriental verbs, the third of the spatial verbs, relies on orientation of the hand shape, depending on the location or position of the goal location. 'To look' is a common orientational verb. While the actual handshape does not change, its orientation does, by indicating up, down, around, or straight ahead, wherever the actor in the sentence is looking (Kegl 2017).

Inflecting verbs, on the other hand, as opposed to spatial verbs, are verbs that agree with person and number. NSL has both a dual plural and a more than two plural form in all three persons. Person is set up in space as with other things. A noun almost always appears in its singular form. Therefore, if there is more than one person or thing, there will be more than one location, and up to three verb motion signs can be given for three or more persons or things (Kegl 2017).

Agreement is indicated by movement. Take the verb 'give' as an example in the sentence: 'The mother gives the gift box to the child'. The hands start at the body of the mother as the subject, or of the signer if the signer has assumed the role of the mother, and stretch out/move down and towards the location of the child, an indirect object. The box is signed as a classifier cliticized to the verb. Mother and child have been previously signed and located (Kegl 2017).

The verb 'give' sometimes appears as a serial verb 'give-receive'. In that scenario, the signer assumes the position of the child after that of the mother and signs the reception of the gift. The signer looks and motions down in one direction when signing as the mother and, twisting the torso, looks and motions up in the opposite direction when signing as the child, and the child reaches out its hands and pulls them back inward. This is termed 'role shifting' and is quite common in NSL. Another example of a serial verb pair is 'buy-exchange' (Kegl 2017).

Plain verbs are all the rest of the verbs, and include both simple transitive constructions and copulative constructions. An example of a simple transitive construction is the sentence, 'The man cooks the fish', which involves neither a spatial location nor any kind of movement, nor agreement of any kind. Instead, the subject precedes the verb and the direct object follows the verb, which is how the subject and object are identified. Thus, the 'man' is signed first, then the verb 'cook', and finally the 'fish' (Kegl 2017).

NSL does not have a copulative verb corresponding to the English verb 'to be'. The subject followed by the predicate noun or adjective is all that is needed, without a verb. For example, the sign for 'pain', the tight fist opening and closing, juxtaposed next to the head, jaw

or stomach, is all that is needed to convey the idea that the signer has a headache, toothache or stomachache. Or, the sentence 'I work as a doctor', is signed by dropping the preposition 'as' and making the sign for oneself, then the sign for 'work', followed by the sign for 'doctor'. The SVO word order tells it all.

In summary, NSL relies both on word order and agreement to make the necessary grammatical connections in a sentence. Simple transitive and copulative sentences can be decoded with SVO word order. Sentences involving spatial direction, motion or orientation generally use SOV word order (or arguably SVO after preidentifying the referents). And sentences which involve agreement use inflecting verbs which agree with the person and number of the arguments, as indicated by the appropriate signs and movement. The nouns themselves do not inflect.

## Chapter 7 Discussion and Analysis of Findings

The purpose of this thesis has been to examine the case, agreement and word order systems of five written and two signed creole languages as one axis along which to consider the issue of creole genesis and linguistic universality. As newly emerging languages, creoles were especially targeted for investigation because of the unique window they afford on the human language faculty. Two signed languages were included in the languages studied because their genesis follows a different path from that of a typical creole, especially Nicaraguan Sign Language with its unusual history of children cut off from the influence of lexifier or substrate languages.

By narrowing the study to seven creole languages and focusing on only one grammatical structure, that of case, agreement and word order as a complementary system, it has been possible to look specifically for what have been termed ‘core indispensable features’ that are common to these several languages, and by extension to language in general. By ‘core’ is meant features that are at the center of the system in their importance to answering the need to identify the grammatical and semantic role of the arguments of a sentence. By ‘indispensable’ is meant features that cannot be done without and that always occur in the development of language (McWhorter 1997:160). The existence of core indispensable linguistic features aligns with the concept of inherent language as an innate aspect of the language faculty.

There continues to be an ongoing controversy over the genesis of creole language, and of language generally. In the realm of creole language, there exist two main theories. One is that creoles owe their origin to the lexifier language and the substrate languages that constitute the history and background of the particular speech community. This approach holds that creoles, like language in general, are derived and constructed on a platform of general cognitive ability not specific to language, wholly in response to environmental influences, thus being an empirical and environmental approach. The other is that creoles have their origin in innate (genetic) language endowment. It holds that creoles, like other languages, are initially responsive to the fundamental and inherent linguistic expectations of the members of the speech community, thus being a universalist approach. In their strong versions, these theories exclude each other, but the reality undoubtedly lies somewhere in between (McWhorter 1997:1). The data gathered in this thesis provide support for including the universalist approach as part of the explanation for creole genesis.

The data that has been gathered from the seven creole languages, while providing plenty of illustrations of idiosyncratic features of each such language, nevertheless reveal a common pattern which arguably goes “beyond the scope of chance” and which cannot simply be traced to lexifier or substrate origins (Bickerton 1981). This is particularly true with respect to Nicaraguan Sign Language, where nativization by children of the available linguistic input resulted in a full-grown grammatical language essentially without the influence of lexifier or substrate languages. The common pattern of how the complementary system of case, word order, and agreement emerges in creoles is the basis for the argument that there are core indispensable features of creole origin.

Beginning with case marking, common nouns in the studied creole languages across the board do not inflect to mark subject or object. They are essentially indeclinable. However, there is more diversity in case marking with respect to pronouns. For example, there is some adpositional case marking in Tok Pisin and Sango uses the clitic *a-* to signify case, but these usages are positional in nature. Two other languages have elaborate pronoun paradigms which include subject and object forms, viz. Afrikaans and Cape Verdean Creole. Cape Verdean Creole has a system of pronominal clitics that attach to verbs as a means of marking the direct object case. It also uses pronominal nonclitics to mark the indirect object case when they appear with prepositions, but this is more positional than inflectional in nature.

These last two languages stand out from the rest as more developed syntactically and as having been more heavily influenced by their respective lexifier languages, but this greater development may be due to the fact that these creoles have been around a relatively longer time and have had ample time to begin to decreolize the structure of their language in response to lexifier influence or other contact language influence. In fact, Afrikaans is sometimes characterized as a semi-creole, meaning that it could also be characterized in some respects as a dialect of Dutch.

In the two signed languages, ASL and NSL, the signs for individual nouns do not change or inflect regardless of their position in space or their grammatical role. ASL and NSL also do not differentiate between common nouns and pronouns, since both are represented by specific spatial locations. It has been observed that creoles tend to lack inflectional morphology in general (Crowley 2008; Siddiqi 2014). One very limited study in APiCS showed that Patient marking in creoles, for example, occurred only 18% of the time (Haspelmath 2013a).

Gender, whether semantic or grammatical, is also not marked inflectionally in the studied creole languages, but natural or semantic gender is often differentiated by male and female versions of nouns or by the use of the word for man or woman along with the item in question. Similarly, gender in the signed languages is marked by use of the sign for male or female, and pluralization is marked by multiple spatial locations.

In short, the data show that there is a clear pattern in the subject creole languages to eschew inflection of nouns in favor of other grammatical relationship strategies, with partial exception for pronouns in two situations. Of the 261 world languages surveyed in WALS (Iggesen 2013), over 38% had no inflectional case marking.

Reflexives in the creoles involve the affixation of a clitic or the addition of a word for ‘self’ in two languages and make reference to the body or a body part in three languages, but inflection of the pronoun itself does not occur, except in Afrikaans, which has a full paradigm of reflexive pronoun forms. Similarly, pointing to oneself as the sign for self is the mode of signing reflexives in signed languages, thus using the body as the referent.

Prepositions are common in the written creoles. The specific case (instrumental, locative, genitive, and so forth) can be identified by the particular preposition used. For example, *bilong* marks possession and *long* marks the direct/indirect object in Tok Pisin. Nevertheless, prepositional objects themselves are not inflected in the various written creoles, with exception again for pronominal objects in Afrikaans and Cape Verdean Creole. Adpositional marking is partway along the continuum of Blake and Heine, referred to below. Prepositions do not exist as such in the signed languages, but are fully incorporated into the signed verbs by movement or other indication of place.

Based on this data, I conclude that case inflection as such is not a core indispensable feature of the written creoles. It is not even an option in the signed creoles. Rather, the evidence supports the position that word order, discussed below, naturally and unavoidably arises as a feature of the creole languages before there is a necessity or choice to add inflectional endings to common nouns. This finding as applied to language generally finds some support in Blake’s (2001) hierarchy of case and Blake’s (2001) and Heine’s (2009) continuum order of development of case, discussed in Section 2.3 above, which illustrate how case evolves over time. Also, the reference to a body part for the reflexive suggests something more basic in human conception than an inflectional ending or form.

To be sure, the unfolding of language often involves the regular development of case, as proposed by Blake and Heine in Section 2.3 above, but inflectional case is not present in the beginning stages of creole languages, written and signed, and in many languages never arises at all, as documented in the WALS survey referenced above. Moreover, as already noted in Section 2.1 above, whatever case systems the lexifier and substrate languages may have are simply not carried over and adopted as a feature of pidgin/creole speech but are left behind, in effect deemed not essential to basic communication. If it is argued that pidgin/creole speakers are simply dumbing down their respective substrate languages in the search for a common linguistic denominator, it can simultaneously be argued that this shows that case inflection is not perceived by those in the process of creating the creole as a necessary or core indispensable feature of language. In other words, whereas inherent linguistic expectations require some method for identifying grammatical roles, these expectations do not call for case inflection. Instead, word order, possibly supplemented with some adpositional marking, verbal affixation and clitic marking, meets that initial inherent need.

Word order is a more diverse and interesting structure to consider. SVO is the primary word order for all the creoles considered in this thesis, with some significant variations to be discussed. In the world generally, the WALS survey of 1,377 languages shows that 41% utilize SOV and 35% utilize SVO as their primary word order (Dryer 2009b), whereas the APiCS survey of some 71 creole languages shows that 93% utilize SVO and only one creole uses SOV exclusively (Huber 2013). This predominance of SVO in creoles is consistent with a lack of morphological case, as argued above and in Crowley (2008), whereas the greater predominance of SOV in the world's languages generally is consistent with the presence of inflectional case in verb final languages (Blake 2001; Siewierska & Bakker 2009), discussed in Section 2.2 above. The relative order of direct and indirect object varies in the creoles, but the indirect object is often marked by an adposition.

With Afrikaans we again see a more elaborate grammatical development, with the adoption of the verb second (V2) principle, present in the Dutch lexifier language, which causes VSO word order to occur if a sentence begins with an adverb or adverbial phrase. This is also true of Cape Verdean Creole, but less rigidly so. Also, in Afrikaans SOV word order occurs in a nonfinite or participial clause in which the participle is demoted to the end of the clause. Most creoles do not have past participles or verbal conjugation at all but denote tense in periphrastic



ways or by context. Further, most of the creoles do not deviate from SVO word order by having subject-verb inversion with yes/no questions, Afrikaans being the sole exception.

ASL relies on SVO word order in the main clause, but if there are topical constructions, tag questions, and pronominal right dislocations, a freer word order may result. However, Neidle et al. (2000) argues that SVO word order is maintained in the complementizer clause, that topical constructions and tag questions occur outside that clause, and that therefore ASL is not characterized by free word order.

NSL presents a somewhat different situation. SVO applies in simple transitive verb constructions and with 'plain' verbs not involving agreement. However, a verb final construction (OSV and even SOV) is the apparent word order with spatial verbs because of the need to first establish the ground (the object) and the thing that is moving or located (the subject) in order for the action verb to then make reference to (connect with) them. There is no precedent for this manner of construction in the spoken languages of the environment (English or Spanish) or any of the substrate languages of the Deaf community of ASL and NSL. Further, with inflecting verbs that agree in person and number with the subject and object of the sentence, the meaning of the sentence, established by both manual and nonmanual signing, is established by movement between the previously referenced subject and object. It is almost as if the subject and object were first being topicalized but without the semantic sense of topicalization or intensification. As Neidle et al. (2000) argued for ASL, if one treats the establishment of the subject and object referents in NSL as topicalizations falling outside of the complementizer clause proper, then one can make the argument that SVO prevails in the actual complementizer clause with all NSL verbs and that SVO is the default or preferred word order overall.

In summary, since the SVO or verb medial word order allows for the easiest recognition and differentiation of the subject and object arguments, which makes case inflection unnecessary, I conclude that the SVO word order, as opposed to free word order or a different word order, is a core indispensable feature of creole language which meets the initial linguistic expectations of the language learner. Even when the physical modality of a signed language, when dealing with verbs that involve a source and goal or with person and number arguments, requires that the source and goal or the persons (the referents) be set up before the verb is engaged, the grammatical roles these arguments play are not identified by case inflection but are ultimately identified by the SVO word order, the arguments having been simply preidentified as

the S and O referents. Argument differentiation and identification is the primary purpose of the case, word order, and agreement system, and a fixed initial word order seems to serve this purpose best.

Agreement marking, the final prong of the case, word order and agreement system, is preferred when the verb is in initial position in the sentence (Blake2001; Siewierska & Bakker 2009), but conversely the presence of agreement marking does not necessarily imply a verb initial construction. In fact, none of the word orders considered in this thesis is verb initial.

Furthermore, there is no person, number or gender agreement between the subject and object arguments and the verb in all five written creoles since the creole verbs do not conjugate, with the following qualifications. There is a limited exception in Tok Pisin, where the verbal suffix *-im* marks transitivity and in that sense calls for the existence of a subject and object, but without strictly creating an agreement relation between the verb and its arguments. As usual, Afrikaans is an exceptional case. For instance, Afrikaans marks the past participle of some verbs with the verbal prefix *ge-*. The presence of the past participle changes the word order of the clause and can also mark a passive construction, both of which provide information about subject and object distribution. Afrikaans also has suppletive forms of the verbs ‘be’ and ‘have’, which have person and number forms. Cape Verdean Creole has a passive form marked by the verbal suffix *-du*, which marks the preverbal subject-theme position and is accompanied by the absence of an agent. Sango marks the presence of a subject by the verbal prefix *a-*. Similarly, a few Haitian Creole verbs have a passive sense without any agency implied.

Inflectional agreement of adjectives with the head noun in noun phrases occurs to some extent with number (Tok Pisin, Afrikaans and Sango), with gender alternations (Haitian Creole), and with respect to human head nouns (Cape Verdean Creole), but such agreement does not help meaningfully with grammatical argument differentiation and identification.

Agreement, somewhat differently conceived of, plays a much more significant role with the signed languages. ASL has what are called person-agreeing verbs and NSL has a class of inflecting verbs, both of which types of verb agree with the person and number of the subject and object of the verb. Nouns in ASL and NSL do not in any sense inflect; rather they are simply assigned positions in space. Nevertheless, the verbs are said to agree with them by making specific reference to such spatial positions, thus establishing a connection between the verb and the subject and/or object of a sentence by means of movement and directionality of signing, from

subject to object according to the sense of the verb. One might visualize this in a written sense as if lines were drawn that connect the verb with the subject and object as effectively as inflectional agreement could do.

In both signing situations the subject and object have to be preidentified spatially. In Section 2.2 above it was stated that a verb final language having preverbal arguments usually relies on case marking for argument differentiation, and we have seen that NSL and ASL can be argued to have a SOV or OSV word order with inflecting (and person-agreeing) verbs. However, the mode of agreement in NSL and ASL does away with the need for inflectional case marking by establishing spatial positions for the subject and object, which are then linked by the verb in the manner described. This mode or concept of agreement in the signed languages does not seem inconsistent with the observation of Siewierska & Bakker (2009) that case marking often occurs together with agreement marking. As argued below, agreement in the morphological sense does not exist in the creoles, and therefore it is no surprise that case marking also does not exist. Thus, the mode of agreement in the signed languages yields functionally the same result as when case marking and morphological agreement occur together.

What then is the core indispensable feature of agreement? If case marking is not an indispensable feature, as earlier argued, and if a fixed SVO word order is, then if the word order changes from SVO to verb final, agreement (rather than case marking) would at first glance seem to be necessary for creating the necessary grammatical relation between the parts of the sentence. However, I argue that the inherent language faculty expects a default SVO word order, and when that seemingly fails, it falls back on an apparent agreement relationship to keep the verb correctly correlated with its arguments. Case marking can do this, but in signed languages case marking is not an option. The signed languages provide evidence for the existence of innate linguistic expectations that surface in the form of a fixed SVO word order without case inflection. Where a verb-final word order seemingly occurs, a mode of agreement is said to exist that yields the same result as the SVO fixed word order, without case inflection. To put it another way, there is an effort in signed languages to use the concept of agreement together with apparent verb final word order in some contexts, the result of which however is to bring about the same result as the SVO word order. As argued above and by Neidle et al. (2000), the subject and object can be thought of as having been topicalized or preidentified in advance, then incorporated into SVO word order.

In summary, the data lend support to the thesis that the lack of case inflection and the presence of SVO word order, with agreement occurring in signed languages as merely a way of preidentifying the referents of the SVO word order, are fundamental or core indispensable features of language which are necessary to establish grammatical relations among the verb and its arguments. Restated, the data support the thesis that case inflection is not an indispensable feature, that the SVO word order is an indispensable feature, and that agreement, when it occurs in signed languages, is not morphological and constitutes rather a kind of topicalization that is consistent with SVO word order.

## Chapter 8 Conclusion and Suggestions for Further Research

The investigation undertaken in this thesis has been to discover whether core indispensable features of the case, word order, and agreement systems of certain creole languages exist that can be argued to support the innatist theory of language emergence. The conclusion is that such features exist and they do lend such support. The data that have emerged from this study are sufficient to lend meaningful support to the conclusions stated in the previous section: that case inflection is not an indispensable feature of newly emerging languages, that the SVO word order is an indispensable feature of emerging languages, and that even agreement, when it is said to occur in the signed languages, constitutes only a kind of topicalization without case inflection, leaving the SVO word order as the core feature. These features have the characteristics of what have been called ‘core indispensable features’ which are central to the language faculty, inherently responsive to the linguistic expectations of the language learner.

To further develop the thesis of this paper it would be well to document the case, word order, and agreement systems in many additional creole languages from as diverse origins, geographically, historically, and with differing lexifier languages, as realistically possible. It would be especially informative to document several more signed languages, although as unique an exemplar as NSL may be hard to find. Indeed, NSL is a powerful example of how language can emerge substantially on its own and is therefore the strongest piece of evidence in favor of the conclusions drawn in this thesis. NSL deserves to receive more recognition for the evidence that it represents.

To be sure, the sample of creole written and signed languages studied in this thesis is small in comparison to the inventory of the world’s languages. It is acknowledged that this sampling of creole languages is not sufficient to draw final conclusions along the lines suggested herein. However, some of the relevant comparisons have been drawn in the surveys conducted by WALS and APiCS and those comparisons are either supportive of the conclusions drawn in this thesis or are at least not contrary to them. It is also acknowledged that the amount of data in WALS and APiCS is itself limited, and the languages in those surveys are not all documented in the same way, nor does each survey cover the exact same set of languages. More extensive survey work needs to be done to create all of the relevant apples-to-apples comparisons.

Undoubtedly the debate over universalism/innatism and empiricism will rage on for decades, with evidence continuing to be adduced for both positions. This thesis constitutes a

contribution of new evidence on the universalism/innatism side of the debate in a narrowly defined area of grammatical structure and type of language. Further research could contribute to this debate in defining other narrow areas of grammatical structure occurring in the context of specific language types as a way of reducing the number of variables that play into this whole area and thereby making it possible to draw stronger conclusions. In any event, the data and conclusions set forth in this thesis should be considered of serious relevance to anyone interested in language genesis, acquisition, development and pedagogy.

## Appendix One: Table Summary of Case, Word Order, and Agreement Features

Language	Word Order	Inflection: Nouns and Pronouns			
		Person and Number	Gender	Pluralization	Reflexives
Tok Pisin lexifier: English	primary word order is SVO, even with y/n questions; the subject normally precedes the predicate, and sometimes occurs resumptively; objects follow, usually the direct object followed by the indirect object if there is one	person and number are marked only on pronouns; a partial pronoun paradigm exists; the 1pl has inclusive and exclusive forms	no gender marking; gender is determined by discourse	1p and 2p pl pronouns are marked by the suffix <i>-pela</i> ; nouns have no plural inflection but are preceded by <i>ol</i> ; dual and trial pronoun forms exist	marked by <i>yet</i> for self after the pronoun
Haitian Creole lexifier: Spanish	primary word order is SVO, even with y/n questions; the subject normally precedes the predicate, objects follow; usually the indirect object (if there is one) precedes the direct object except for certain verb-preposition combinations	person and number are marked only on pronouns; a full pronoun paradigm exists	no gender marking, but there are male and female versions of nouns for persons, and there is natural gender for animals	nouns are indeclinable, but the definite determiner <i>yo</i> marks the plural; <i>yon</i> is the indefinite determiner	<i>ko</i> 'body' and <i>tet</i> 'head' mark the reflexive, followed by the personal pronoun
Afrikaans: lexifier: Dutch	word order is SVO and V2 in a simple main clause, but is VSO in order to maintain V2 if the sentence begins with an adverb or adverbial phrase, and is SOV in a non-finite or participial clause; also subject-verb inversion occurs in y/n questions; in other words, subject/object distribution depends on verb placement	person and number are marked only on pronouns; a full pronoun paradigm exists	no gender marking on nouns, but there are male and female versions of persons; 3sg pronouns have gender; inanimate nouns are inherent masculine; the definite and indefinite articles are indeclinable and hence do not indicate gender	the plural of nouns is formed by adding <i>-s</i> or <i>-e</i> ; the definite and indefinite articles are indeclinable and hence do not indicate sg or pl	there is a full paradigm of reflexive pronoun forms, with <i>-self</i> as a suffix unless the reflexive is obvious

Table Summary of Case, Word Order, and Agreement Features (continued)

Language	Word Order	Inflection: Nouns and Pronouns			
		Person and Number	Gender	Pluralization	Reflexives
Cape Verdean Creole  lexifier: Portuguese	primary word order is SVO; the indirect object must precede the direct object in a double object construction; there is no prepositional variant; no subject-verb inversion, but inversion can occur if the sentence begins with an adverb or adverbial phrase	person and number are marked only on pronouns; a full pronoun paradigm exists for clitics and nonclitics	no gender marking on nouns, but there are male and female versions of animates, and also a male and female marker for persons	bare plurals are marked by -s or -is unless the context (article, quantifier, number, possessive adjective, or demonstrative) is plural	reflexives are marked by reference to a body part, <i>kabesa</i> 'head', or sometimes by affixing <i>-me</i> 'self' to a nonclitic pronoun
Sango  lexifier: Ngbandi	word order is SVO; no y/n inversion but there is a question marker <i>eski/esi</i> (like that in French <i>est-ce que</i> )	person and number are marked only on pronouns; subject and object personal pronouns are the same, but they vary in direct discourse in the sg and 1pl according to a partial paradigm; in indirect (logophoric) discourse there is a different form, one for the sg and one for the pl; the pronoun <i>lo</i> is also used to mark inanimates, and <i>lo so</i> marks something just mentioned or about to be mentioned	natural gender is indicated periphrastically by connecting the noun with the word for man or woman by the preposition <i>ti</i> 'of/to/for'	plurals are formed by affixing <i>a-</i> to animate nouns, unless the plural sense is inherent; the plural is sometimes used resumptively with multiple sg pronouns	the reflexive is marked by reference to <i>tere</i> , the word for 'body', together with <i>ti</i> and the personal pronoun in a possessive sense



Table Summary of Case, Word Order, and Agreement Features (continued)

Language	Word Order	Inflection: Nouns and Pronouns			
		Person and Number	Gender	Pluralization	Reflexives
American Sign Language;  lexifier: French Sign Language or pidgin of ASL	SVO is the underlying word order; sentences with topical constructions, tag questions and pronominal right dislocations exhibit other word orders, but the underlying CP remains SVO	person and number of a referent are established with reference to one or more specific locations in space; pronominal reference is thus unambiguous; nouns are classified according to size and shape; definiteness or indefiniteness is signed by specific or nonspecific manual pointing and by focused or wandering eye gaze	gender is not specified if obvious from the context; otherwise the sign for man or woman is used as necessary	reference can be to one, two or multiple persons or things as designated by as many spatial locations as needed	the reflexive is indicated with a specific sign that points to the intended referent
Nicaraguan Sign Language;  lexifier: none	NSL uses SVO for plain verb or simple transitive verb constructions without agreement of any kind – word order is the key; OSV (or SOV) is used for spatial verbs because of the need to specify the ground (as the object) and the thing that is moving (the subject) first in order for them to be incorporated into the action of the verb by manual signing; if the verb is locative, the location of the subject is indicated by eye gaze	person and number of a referent are established with reference to one or more specific locations in space; pronominal reference is thus unambiguous; nouns are classified according to size and shape; definiteness or indefiniteness is signed by specific or nonspecific manual pointing	gender is not specified if obvious from the context; otherwise the sign for man or woman is used with the aunt/uncle sign, for example, or the grandparent sign (limited to kinship terms); pronouns are not marked for gender at all	NSL has a dual and a more than dual plural in all three persons; a noun usually appears in singular form in one spatial location and if more than one is intended, more than one location is used	the reflexive is indicated with a specific sign that points to the intended referent

Table Summary of Case, Word Order, and Agreement Features (continued)

Language	Inflection: Nouns and Pronouns (cont.)			Agreement	
	Subject/Object Case Marking	Prepositional Case Marking	Genitive Case Marking	Verb-Arguments	Adjectives
Tok Pisin	no inflection on nouns or pronouns to mark subject or object; <i>i</i> as a particle divides subject and predicate and marks the subject in 3p context; the preposition <i>long</i> marks direct/indirect object	<i>long</i> ‘by/with/at/to’ marks the instrumental and locative cases, <i>wantaim</i> ‘with’ marks the comitative case, and <i>winim</i> ‘not more’ marks the unequal case	preposition <i>bilong</i> precedes and marks the possessor, and can also mark adjectival attribution	no person, number or gender marking on verbs; <i>-im</i> as a verbal suffix marks transitivity and creates an agreement relation by calling for a subject and object; certain serial verbs mark directionality and change	the suffix <i>-pela</i> marks some adjectives if modifying plural nouns
Haitian Creole	no inflection on nouns or pronouns to mark subject or object position; a personal pronoun before a verb is marked as the subject and objects then usually immediately follow the verb	<i>ak/avek</i> ‘with’ marks comitative case, <i>an/ann</i> ‘to/in’ marks locative case, <i>pou</i> ‘for’ marks the benefactive case, and <i>nan</i> ‘to/in/at/from’ marks the directional case	personal pronouns that follow a noun act as possessive adjectives; <i>pa</i> marks the pronominal possessive; the possessor is bracketed by the possessee and an optional determiner	no person, number or gender marking on verbs; there is no differentiation between transitive and intransitive; verbs are often marked with a final <i>-e</i> ; no passive voice but a couple of verbs have a passive sense without any agency implied	some gender alternation in endings
Afrikaans	nouns do not inflect for case; pronouns have distinct subject-object forms in the singular, a familiar-politeness distinction in 2sg, and a gender distinction in 3sg; the position of the subject and object depend on the verb placement	the agent in a passive construction is marked by the preposition <i>deur</i> ‘by’; the preposition <i>vir</i> can be used to mark the direct and indirect object and also to mark the subject of a relative clause; <i>toe</i> ‘to’, marking directionality, is a post-position; there is a full range of other prepositions with typical case marking	a full paradigm exists for adnominal and pronominal possessives, with some syncretism; the possessive of nouns is formed periphrastically by the insertion of indeclinable <i>se</i> between the possessor and the possessee	no person, number or gender marking on verbs, but some verbs form a past participle with the prefix <i>ge-</i> on the stem, demoting the participle to the end of the clause, thereby changing the word order, and also allowing for a passive construction; also, the verbs for ‘be’ and ‘have’ have suppletive forms	many attributive adjectives have <i>-e/-te</i> as a suffix in sg and pl but no case distinctions; predicate adjectives do not inflect; <i>-er</i> marks comparatives and <i>-ste</i> superlatives

Table Summary of Case, Word Order, and Agreement Features (continued)

Language	Inflection: Nouns and Pronouns (cont.)			Agreement	
	Subject/Object Case Marking	Prepositional Case Marking	Genitive Case Marking	Verb-Arguments	Adjectives
Cape Verdean Creole	nouns do not inflect for case; pronouns, of two kinds, clitics and nonclitics, have a full case paradigm for number and case, whose position is structurally marked; the subject clitic immediately precedes the verb and the direct or indirect object clitic cliticizes to the verb; nonclitic subjects are often topicalized or used for emphasis	nonclitic pronouns appear as objects of prepositions; <i>di</i> 'of' can be used to mark possession; prepositions are used to mark location, instrumentality, temporal role, etc., particularly <i>riba (di)</i> 'above', <i>baxu (di)</i> 'below, under', and <i>na</i> 'on/at/to'	possessive adjectives have their own full paradigm; possession is sometimes marked periphrastically with <i>di</i> 'of'	no person, number or gender marking on verbs and no subject-verb agreement; verbs suffixed with <i>-du</i> form the passive when used without an agent or in impersonal constructions	adjectives inflect to agree with the modified noun if human; masculine is the default form for nouns without natural gender; articles inflect for number but not gender; comparative is marked by <i>mas</i> _____ ( <i>di</i> ) <i>ki</i> 'more than' and <i>sima</i> 'same as'
Sango	nouns do not inflect for case; the affixation of <i>a-</i> to a verb marks the immediately preceding noun as the subject; a pronoun subject doesn't need the <i>a-</i> marking; the object immediately follows the verb; the indirect object is marked by the preposition <i>na</i> ; <i>a-</i> affixed to a verb, without an overt subject, acts as the impersonal 'it' in English	<i>na</i> is a very common, all purpose preposition to mark place, time, direction, possession, instrumentality, and benefaction; it can also mean 'and' and coordinates and connects clauses; the preposition <i>ti</i> 'of/to/for' is the most common word in Sango in various uses	possession is marked periphrastically by connecting the possessor and the possessee by the preposition <i>ti</i> 'of/to/for'	no person, number or gender marking on verbs; the only inflection is the affixation of <i>a-</i> for subject marking; no past participle and no passive voice; in a subordinate clause headed by <i>ti</i> , the implied subject is the same as that of the matrix clause; <i>yi ti</i> + subject pronoun intensifies the subject; verb Sango has a causative verb <i>sara</i> , like the English 'do', which acts like a modal; a verb can nominalized like a gerund by the suffix <i>-ngo</i>	a modifier may be related to its head by <i>ti</i> 'of/to/for'; adjectives can form compounds with nouns; <i>a-</i> is affixed to adjectives to agree with plural nouns similarly marked

Table Summary of Case, Word Order, and Agreement Features (continued)

Language	Inflection: Nouns and Pronouns (cont.)			Agreement	
	Subject/Object Case Marking	Prepositional Case Marking	Genitive Case Marking	Verb-Arguments	Adjectives
American Sign Language	the signs for nouns do not change or inflect depending on their position or role; there is no paradigm as such for pronouns in their various forms, only a spatial location or a person physically present; eye gaze or head tilt may mark the subject of an intransitive sentence	prepositions do not exist as such, but are incorporated into motion or locative verbs applicatively	possession is indicated by a sign pointing to the possessor, or head tilt indicates the possessor and eye gaze the possessee	plain (nonagreeing) verbs use nonmanual signs, such as eye gaze and head tilt, to express agreement with abstract syntactic features (AgrS and AgrO); person-agreeing verbs (such as ‘give’) use manual signs to express agreement with subject and object by motion from from one referent to the other, with the direct object being signed separately or incorporated into the verb; with locative and motion verbs, there is no agreement with a subject, only the source and goal or location is signed	there are various signs for the attributes of things, and once the thing is established by sign, its characteristics are signed, depending on its physical or abstract nature; thus, modifiers follow the noun
Nicaraguan Sign Language	the signs for nouns do not change or inflect depending on their position or role; there is no paradigm as such for pronouns in their various forms, only a spatial location or a person physically present with various kinds of pointing	prepositions and postpositions do not exist as such, but are incorporated into motion or locative verbs applicatively	possession is indicated by a sign pointing to the possessor, or head tilt indicates the possessor and eye gaze the possessee	inflecting verbs (as opposed to spatial or plain verbs) mark subject and object by agreement with person and number, indicated by movement, rather than by word order; the subject of ‘give’, for example, is manually signed first at a given location and then the motion of ‘give’ is towards the recipient as an indirect object; the direct object (the thing being given) is signed topically or is incorporated into the verb clitically; with locative and motion verbs, there is no agreement with a subject, only the source and goal or location is signed	there are various signs for the attributes of things, and once the thing is established by sign, its characteristics are signed, depending on its physical or abstract nature; thus, modifiers follow the noun

## Endnotes

<sup>1</sup> Lao may constitute an exception because of its reliance on discourse and pragmatic factors rather than case, agreement or word order (Enfield 2009).

<sup>2</sup> Veenstra (2008) outlines the evolving approach taken by Bickerton in the face of mounting empirical evidence against the strong version of the LBH.

<sup>3</sup> McWhorter dismisses the role of children in generating a creole, giving three arguments (McWhorter 1997:69): 1, why would the adults around children be motivated to imitate them rather than continue to speak as they had for years?; 2, wouldn't new incoming slaves look to the adults in the community as their language models?; and 3, since there often is a comparative lack of children in the community, there would be ample time for the adult pidgin to expand into a full language on its own without input from children. These arguments are subject to criticism on the basis that: 4, since the pidgin developed by adults was adequate for the adults' purpose, why wouldn't they continue to speak as they had always done? moreover, since the adults were well past the so-called 'critical period' or 'sensitive period' for the learning of language (Ortega 2013:12-14), it would not be likely that they could construct, let alone master, the expanded grammar that children would arguably be developing; 5, new incoming slaves would be more likely to want to learn the expanded grammar of the rising generation since it would be more useful than learning the reduced pidgin of the older slaves; and 6, it is disputable about how many children would form a critical mass, and, echoing the argument in 4 above, the adults presumably no longer had the tools and the mental ability to develop a full new language anyway, so how well could the pidgin expand compared with the ability of new and young minds to create new grammar?

<sup>4</sup> For example, McWhorter provides an extensive analysis of the transfer of serial verb constructions from the West African languages that are the primary substrates of Caribbean creoles.

<sup>5</sup> Other theories of creole genesis include the 'babytalk' theory (cf. foreigner talk), monogenesis (arguing for a common origin of creoles in pidgin Portuguese spread during Portugal's wide ranging explorations), and the superstratist regional theory (McWhorter 1997).

<sup>6</sup> The pragmatics of discourse may be thought of as a fourth way to convey meaning without recourse to case, agreement or word order, as in Lao, which eschews both case and agreement and arguably any basic word order (Enfield 2009).

<sup>7</sup> The term 'mark' or 'marking' in its various grammatical forms used herein is to be distinguished from the theory of 'markedness' as a method of ranking relative preferred usage.

<sup>8</sup> If case is considered universal, as can be argued under the concept of Abstract Case, then according to some linguists, any system that marks the dependent relationship of noun to head, such as word order or agreement, is an expression of case (Blake 2001: 58).

<sup>9</sup> It is worth noting that English has also retained morphological case for the comparative and superlative usage (-er and -est endings), and for the plural (-s, -es endings).

<sup>10</sup> Most of the research available for this thesis focused on nominative-accusative systems. A comparison of the results with ergative-absolutive systems would be an interesting line of research to be carried out in the future.

<sup>11</sup> It is beyond the scope of this paper to discuss the arguments for weak versus strong lexicalism and for lexicalism versus anti-lexicalism.

<sup>12</sup> The World Atlas of Language Structures surveyed anywhere from a few hundred languages to well over 1,000 languages with respect to various features. In a world where there are over 6-7,000 known languages, this is of course nowhere near a majority of the possibilities, so generalizations drawn should be accepted only with regard to their limitations.

<sup>13</sup> The Atlas of Pidgin and Creole Language Structures covers some 130 structural linguistic features in 76 different languages. There are at least 500 known pidgin/creole/mixed languages in the world. As with WALS, a sampling of some 76 languages can hardly be said to constitute a majority of the world's creole languages, but these were the best studied for which good linguistic material was available (Michaelis et al. 2013c).

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