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ISSUES IN ZULU RELATIVIZATION

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anthropological text), and *Izulu Eladuma Esandlwana* (an historical drama). He has also written a number of poems published under the title *Iziziba ZoThukela*, and has compiled and edited the poetry anthologies, *Izinsungulo* and *Amagagasi*.

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INTRODUCTION

0.1 General remarks

Zulu is a language of the Nguni group of the South-Eastern Zone¹ of Bantu languages and is spoken by approximately 5 400 000 people.²

As far back as 1848, the Zulu language was investigated by a missionary of the American Board in Natal, James C. Bryant. In that year his ideas on the language were put on paper under the title, *The Zulu Language*, and this valuable contribution of some 13 pages was published in the following year in the *Journal of the Oriental Society*.³ Bryant's work heralded the beginning of a tradition of analysis in Zulu that was to capture the interest of a number of investigators over a period stretching up until the present day.

The earlier grammarians such as James C. Bryant, Lewis Grout, Hans P.S. Schreuder and John W. Colenso⁴ did little more than record surface data, but others, notably Clement M. Doke delved further into the subject of linguistic analysis. In the Jubilee Tribute to C.M. Doke in *African Studies*,⁵ the magnificent work done by this pioneer is well reflected:⁶

"The appended bibliography of Doke's writings reflects *only one aspect of his work* in the field of African linguistic studies - his unrivalled contributions to the development of Bantu studies, stimulated by his establishment of a model and terminology for Bantu linguistic analysis - his outstanding phonological, morphological and lexicographical studies of so many individual languages - his magnificent

contributions in comparative Bantu linguistics; in Bantu linguistic historiography, bibliography and classification; in editing this journal and various other series of Bantu linguistic publications [sic]."
[Italics---GP]

In Zulu alone, he ushered in a new era of analysis in the 1920's, establishing a classification and terminology that has, to the present day, constituted *a model framework for research*.

The framework within which Doke conducted his analysis of Bantu languages was influenced by the so-called *empiricist* approach, which dominated the international linguistic scene in the early decades of the twentieth century. Newmeyer characterizes this approach as follows:⁷

"The fundamental tenet of empiricism is that all nonanalytic knowledge is derived from experience alone. Clearly such a philosophical view has profound implications for every intellectual endeavor. Among other things, it entails that all learning take place through inductive generalizations mediated by sense experience. Another way of putting it is that children are born "blank slates," with no interesting predispositions structuring the acquisition of knowledge. Likewise, it goes along with an extremely strong view of theory construction in science — that for any statement, theoretical term, etc. to be meaningful, it has to be related to observation in some fairly direct way."

He goes on to say:⁸

"Empiricism struck an especially responsive chord in linguistics. To hard-headed fieldworkers busy with the initial descriptions of hundreds of "exotic" languages, Humboldtian speculations about "inner form" and Schleicherian pronouncements of language evolution seemed as unscientific as Greek mythology."

It was not until the 50's that the goals and methods of *general linguistic analysis* were redefined. The publication of *Syntactic Structures* in 1957 by Noam Chomsky led to a genuine scientific revolution in the study of language,⁹ and it was only a matter of time before his ideas filtered through into the field of *Bantu linguistic analysis*.¹⁰

Chomsky's revolutionary approach to linguistic analysis is aptly characterized by Newmeyer as follows:¹¹

"The essence of Chomsky's revolution in linguistics was his gift to the field of a truly scientific perspective."

He continues:¹²

"...[Chomsky---GP] characterized a grammar simply as "a theory of language," and rejected the empiricist view of one as a mechanically constructable abbreviation of corpus [sic]. In short, a grammar is to be thought of as an axiomatized system generating an infinite set of sentences with their associated structural descriptions, and is to be judged for empirical adequacy by its ability to handle the primary linguistic data - the judgments native speakers can make (or, alternatively, the "intuitions" they have) about certain aspects of their language.

Chomsky attacked the structuralist-empiricist concept of a linguistic theory for imposing conditions on theory formation which were incompatible with the provision of an insightful picture of the workings of human language. Chomsky argued that in fact NO science demands that a theory be literally extractable from the primary data. Yet this was the goal that the structuralists had set for themselves."

Chomsky's *Syntactic Structures* was perceived by many structuralists as a threat to their "intellectual hegemony

over the field,"¹³ and counterattacks by the score were directed at his theory. The structuralist's critique was, however, not successful. As Newmeyer notes,¹⁴

"Little by little, the philosophic and scientific underpinnings were knocked out from under structuralism. And since more than anything else structuralists felt they had SCIENTIFIC justification for their theory, when they lost that justification they had very little to appeal to."

Chomsky's theory of grammar has emerged as the most dynamic and influential linguistic theory that has ever been devised. Its impact is reflected, for example, in the following quotation, also taken from Newmeyer:¹⁵

"In the mid and late 1960s, American universities underwent the greatest expansion in history. New linguistic departments sprung up in a dozen locations and some existing ones literally quadrupled in size. The reputation of Chomsky's theory had grown to the point where, by and large, transformationalists were sought to fill the new positions. In fact, linguistics grew at a much greater rate than almost any other field - a testament to the intellectual appeal of the theory.

By 1970, if not before, it was clear that transformational generative grammar had become the "established" linguistic theory in the United States. An obvious indicator of this fact is that by that year partisans of the theory had simply stopped replying to criticism from linguists in the structuralist tradition. They had no further need to answer the old guard."

In recent years, however, constructive criticism has been directed against the very *assumptions* and *principles* that underlie transformational generative grammar, resulting in

an "undeniable fragmentation of the once monolithic theory."¹⁶ An instance of such criticism is manifested, for example, in the following quotation taken from Givon:¹⁷

"One could go on documenting the kind of empirical irresponsibility that has flourished in linguistics under the direct impact of transformational-generative grammar. The only reason why it seemed possible to so many of the practitioners that a formal model of competence and rules-of-grammar was within reach is because the study of dreamed-up artificial sentences outside their discourse context and detached from communicative function made it appear that the task at hand was manageable and finite. The trivialization of "theory" thus made it possible to trivialize the data as well. Indeed, only the most *sanitized* data could appear compatible with THE MODEL."

Elsewhere Givon says,¹⁸

"The curious thing about transformational-generative grammar is that it somehow succeeded in combining the worst methodological features of the two traditional schools of Western epistemology: The theoretical vacuity of empiricism and the empirical irresponsibility of rationalism. Such a synthesis is, to my mind, unprecedented in the annals of science. If one agrees with Chomsky's view of the central role that the study of language must play in elucidating the nature of human cognition and human behaviour - indeed in constructing a Theory of Man - then one must reject transformational-generative grammar as a pseudosynthesis and useless methodology, and then start afresh."

Numerous alternative models of linguistic description have in recent years been proposed, "some heralded as making as much of a break from mainstream transformational

grammar as this theory made from structural linguistics."¹⁹

However, even though Chomsky's theory of grammar has been dismissed by some linguists as being irrelevant for the description of natural languages, the fact remains that, to date, no truly alternative theory with any credibility has yet emerged.

The immeasurable contribution of Chomsky's theory to our understanding cannot be overlooked. In this regard, Lyons says,²⁰

"I should add that I personally believe, and very many linguists will share this belief, that even if the attempt he [Chomsky---GP] has made to formalize the concepts employed in the analysis of languages should fail, the attempt itself will have immeasurably increased our understanding of these concepts and that in this respect, the 'Chomskyan revolution', cannot but be successful."

Lyons' positive standpoint on the credibility of Chomsky's theory is also reflected in the following statement made by him:²¹

"Right or wrong, Chomsky's theory of grammar is undoubtedly the most dynamic and influential; and no linguist who wishes to keep abreast of current developments in his subject can afford to ignore Chomsky's theoretical pronouncements. Every other 'school' of linguistics at the present time *tends to define its position in relation to Chomsky's views on particular issues.*" [Italics---GP]

This thesis has, therefore, been conceived at a time when, on the one hand, Chomsky's theory of grammar continues to occupy the dominant position in formal linguistic theorizing, and on the other, at a time when various alternative models have been proposed which have led to a fragmentation

of this dominant theory. Against this background of events, there are, I believe, basically two options open with respect to the approach that should be adopted at the outset to a study of the kind envisaged here.

- (i) Either a monotheoretical approach is adopted, in which case the problems identified in the study are explained or accounted for within the domain of a coherent formal theory, namely transformational generative grammar, or
- (ii) A multitheoretical approach is adopted, in which case numerous formal as well as non-formal concepts are invoked to explain or account for the problems identified.

Botha, in the foreword to Sinclair's *Chomsky se teorie van kerngrammatika*,²² comments on the credibility of these two approaches. He expresses the view that it is impossible for a linguist to operate outside the framework of a single theory:²³

"...[dit is onmoontlik---GP] om buite die kader van 'n toereikende teoretiese benaderingswyse insig in die aard en struktuur van menslike taal in die algemeen en die afsonderlike tale te verwerf."

Botha then categorically warns against the dangers of adopting a multitheoretical approach to a linguistic study:²⁴

"Hierdie taalkundiges verkies om nie binne die raamwerk van een goed geïntegreerde, homogene benaderingswyse te werk nie. Hulle werk eerder binne 'n teoretiese raamwerk wat hulleself "skep" uit stukkies en brokkies van 'n verskeidenheid alternatiewe teoretiese benaderingswyses."

He goes on to say:²⁵

"Taalkundiges wat tot die tweede kategorie behoort se kanses op sukses is ongeveer so groot soos diē van die aspirant-jokkie wat die Met wil wen op 'n "blitsige bees" wat hy self geskep het--- uit die romp van 'n renperd, twee pote van 'n windhond, die bene van 'n volstruis, en sē maar, die vaartbelynde kop van 'n jagluiperd."

Botha compares this type of approach with one which takes no cognizance whatsoever of any theoretical considerations. Of the latter he says:²⁶

"Die taalkundige wat "teorieloos" werk se kanses op sukses is ongeveer so groot soos 'n aspirant-jokkie s'n wat die Met op 'n donkie wil wen."

He then sums up his views as follows:²⁷

"...nōg die "teorielose" benaderingswyse nōg die "multiteoretiese" raap-en-skraap-benaderingswyse kan wesenlike bydraes lewer tot die verdieping van die insig in taal in die algemeen en die afsonderlike tale in die besonder. Sulke bydraes kan slegs gelewer word deur te werk binne die raamwerk van 'n enkele toereikende teoretiese benaderingswyse."

Since this thesis is conceived against a heterogeneous background of developments on the international linguistic scene, an unbiased attitude will be taken with respect to the two different approaches outlined above, when a detailed examination of Zulu relativization phenomena is conducted in this study. This in effect implies that the examination will take cognizance of *not only* those considerations that characterize the formal theory, but *also* those which are generally believed to fall *outside the*

domain or scope of the formal theory. However, since Chomsky's theory has played such a major role in contemporary linguistic thought, even to the extent that every other school of linguistics "tends to define its position in relation to Chomsky's views on particular issues,"²⁸ the assumptions that underlie his theory will initially underlie this inquiry as well.²⁹

0.2 Objectives, scope and organization of thesis

The objectives of this thesis may be outlined as follows:

1. To explore the claim made by various linguists that non-formal concepts developed in, inter alia, pragmatic, functional and typological frameworks are indispensable for an adequate understanding of language structure and function, and hence also for relativization.
2. To place this study in a historical and current theoretical perspective in order to highlight some of the predominant issues that have been explored in RCs in general, and in Zulu RCs in particular. In order to achieve this aim, this study would have to:
 - (a) examine some of the earlier grammatical studies of the Zulu relative construction, and
 - (b) ascertain whether those theoretical concepts which are considered necessary for the understanding of the Zulu relative construction, can be accommodated within a theory of relativization.
3. To isolate and investigate the properties that are peculiar to relativization in Zulu. This will involve:
 - (a) a consideration of what kinds of clauses qualify

- as relative clauses (RCs) in Zulu, and
- (b) an exploration of the function and significance of the various constituent elements peculiar to Zulu RCs.
4. To explore and develop theoretical concepts in terms of which the problematic phenomena identified in the data can be explained, and in terms of which the structure and function of Zulu RCs can be described.

Although the ultimate aim of a study of this kind would be the construction of a theory of relativization, the immediate objectives are limited to the exploration of relevant data in a pretheoretical stage of inquiry, as well as the isolation of those aspects and concepts which would be relevant for the construction of such a theory.

Apart from the Introduction and Conclusion, the body of the thesis has been conveniently divided into two parts. Part 1 deals primarily with an historical, and theoretical perspective on the study of RCs in general and Zulu RCs in particular, and provides the background information for the contents of Part 2, where a pretheoretical investigation of Zulu relativization phenomena is conducted. At the end of Part 2, an investigation is undertaken of the possible accommodation of a theory of Zulu relativization within the most recent version of transformational generative grammar, namely Core Grammar. In order to facilitate the perspectives on certain aspects of my analysis, two appendices are included at the end of the thesis - one outlining aspects of a methodological framework for grammatical inquiry, and the other outlining aspects of Core Grammar. These appendices serve as important reference material for the main body of the text. They are, for the most part, self-contained and may be read independently of the bulk of the text.

PART 1

HISTORICAL AND THEORETICAL ISSUES

"The failure of linguists to recognize the diversity of ways of looking at language is quite comparable to the popularity of simplistic schemes of classifying political views, such as the popular belief in a dimension of 'left' versus 'right', with political views supposedly differing mainly in the value on that scale that one takes as an ideal, or the even more popular superstition that one can classify minds in terms of scores on IQ tests." (Underlining---GP)

McCawley¹

Organization and scope

PART 1, which consists of two chapters, provides the historical and theoretical background perspective for the thesis.

Chapter 1 deals with that model which has become a tradition for the description of Bantu languages, viz. the Dokeian model. An outline is given of this model together with a methodological perspective on it. The position of the Zulu relative construction in such a descriptive framework is also outlined.

Chapter 2 deals with a theoretical perspective on relativization. The orientation at the outset to this thesis tends to be formal syntax, which in principle excludes the consideration of non-formal points of view. Yet in order to do justice to the diversity in approaches to language analysis as currently manifested in the literature, non-formal approaches involving pragmatics, functional and typological considerations are also incorporated.

CHAPTER 1Perspectives on the Dokeian Analysis
of the Zulu Relative ConstructionSynopsis

The primary aim of this chapter is to outline some of the significant issues concerning the Zulu relative construction that emerge from Doke's analysis. Doke's analysis is considered important for my study, since it represents the most influential work on the relative construction to date, and it also serves to link my study to previous studies on this construction. Doke's work is thus used here as a frame of reference with regard to traditional observations on Zulu RCs. By way of introduction, an outline is given of the objectives and methodological nature of the general framework of analysis within which Doke's approach was conceived. The inadequacies of Doke's analysis are then highlighted in terms of methodological principles. This requires an outline of the aims of empirical science and the stages or phases involved in the process of scientific inquiry, which are not directly relevant to the general aims of this thesis. However, to facilitate this discussion, an outline of the methodology of scientific inquiry is given in Appendix 1 on page 263. As will be pointed out, Doke's analysis, in spite of its scientific inadequacies,

raises numerous thought-provoking questions - questions which call for explanations. I believe that the provision of adequate answers to such questions in the course of my analysis, will contribute to the fulfilment of the objectives of this thesis as set out in 0.2.

1.1 Introduction

"The study of language in any period of history has always reflected the predominant interests of the time."

Dinneen²

The view expressed in the above quotation, is well attested in the study of Zulu where the approach to grammatical analysis in the 19th century and first half of the 20th century was influenced to a large extent by the views expressed in international linguistics at the time.

The study of the Zulu language may be conveniently divided into two eras, each of which is characterized by its own presuppositional and epistemological perspective on the subject matter:

1. The Pre-Dokeian era
2. The Dokeian era

1.1.1 The Pre-Dokeian era

The Pre-Dokeian era had its beginnings in the middle of the 19th century, at a time when historical and comparative linguistic analysis was making its mark on the general linguistic scene.³ The study of *comparative Bantu philology* progressed during this period as well, with notable works before 1870 by, inter alia, Lichtenstein, Marsden, Boyce, Appleyard, Krapf and Bleek.⁴ Nevertheless the *monographic study of Bantu languages* also gained momentum during this period, having had its roots firmly established in the preceding century, in what has been commonly called the *Age of Brusciotto*, an era in which a number of Bantu languages were investigated and recorded. This *Age*, according to Doke,⁵

"...marked an almost mediaeval approach to the language problems presented by Bantu. From the fourth decade of the 19th Century right on through into the 20th Century, in increasing numbers, the Bantu languages began to be studied in a more modern method with more attention to their intrinsic structure. It might be stated that the mediaeval Latin approach of the "Age of Brusciotto" gave way to the imposition of modern European grammatical methods, in which only to a certain extent was "Bantu grammar" given any free play."

With regard to the study of Zulu, the protagonists of the Pre-Dokeian era were Bryant, Grout, Schreuder, Colenso and Wanger.⁶ The works of some of these authors were to a large extent handicapped by the classical approach, as is evident, for example, in Grout's recognition of three cases of nouns, namely the genitive, the locative and the vocative, and his declension system for pronouns;⁷ Schreuder's introduction of a fourth case, 'the rodcasusen', to refer to nouns used in a subject or object position;⁸ and Colenso's classification of nouns into three classes,

namely, (1) the Simple - Nominative or Accusative; (2) the Vocative, and (3) the Oblique (or Locative) - Dative or Ablative.⁹

The grammarians of this era made some very interesting and significant observations with respect to 'the part of speech' which is investigated in this thesis. It would be beyond the scope of the present study to delve into a detailed review of their works,¹⁰ but those observations which are thought to bear intimately on the subject matter of this study, will be discussed in the relevant sections.

1.2 The Dokeian era

The publication in 1926 of Doke's work, *The Phonetics of the Zulu Language*, represented, in the words of Cole,¹¹

"...a preview of a new framework for Bantu grammatical analysis which was to revolutionise Bantu linguistic studies in South Africa and overseas."

In the following year, Doke's *Textbook of Zulu Grammar* demonstrated in detail the application of the new approach in Bantu grammatical analysis.¹² Since then, minor modifications and innovations have been made here and there by Doke himself and others, but his model has in essence remained unchanged.

With respect to the study of the relative construction in Zulu, Doke's analysis represents the most influential work to date. Over the decades, it has provided the framework for the numerous analyses that have been undertaken on this topic, and it is also used in this thesis as a source of reference.¹³ Before a summary of his analysis

is presented, it would be fitting to reflect on some of the characteristic properties of the general framework within which Doke's model was conceived. In so-doing, the objectives and methodological nature of Doke's own approach to Bantu grammatical analysis would be revealed. At the same time, it is believed, certain deficiencies in his approach would be exposed, giving rise to numerous thought-provoking questions concerning the nature of the Zulu relative construction - questions that would need careful consideration in a study of the type undertaken here.

1.3 A survey of the general 'taxonomic' approach

1.3.1 Introduction

The study of language in the first half of the 20th century was to a large extent influenced by the predominant assumptions of the so-called 'mechanist' or 'non-mentalist' approach of behaviourist psychology and logical empiricism.¹⁴ As noted in 0.1, in terms of this approach only the observable was considered relevant for study and analysis. The non-directly observable knowledge of a fluent speaker or his mental processes were considered irrelevant. Robins observed the impact of behaviourism on linguistics as follows:¹⁵

"This influence was especially strong in Bloomfield, who drastically revised his first book on linguistics, *An introduction to linguistic science* (London and New York, 1914), to bring its theoretical basis in line with the mechanist outlook of such behaviourists as A.P. Weiss, wherein statements about human activity and experience must be wholly expressed in terms relating, at least potentially, to phenomena observable in space and time by any and every observer."

Thus the linguists of this period concerned themselves primarily with those facts about language which were directly observable. The sounds of utterances, for example, and the situations in which utterances occurred, were considered relevant whereas the role of meaning was considered marginal at best. This attitude towards language analysis is reflected in the following statement made by Bloomfield:¹⁶

"In order to give a scientifically accurate definition of meaning for every form of a language, we should have to have a scientifically accurate knowledge of everything in the speaker's world. The actual extent of human knowledge is very small, compared to this. We can define the meaning of a speech-form accurately when this meaning has to do with some matter of which we possess scientific knowledge. We can define the names of minerals, for example, in terms of chemistry and mineralogy...but we have no precise way of defining words like *love* or *hate*.

He goes on to say:¹⁷

The statement of meanings is therefore the weak point in language-study, and will remain so until human knowledge advances very far beyond its present state."

The rejection of meaning may be noted in its most extreme form in Bloch's work, *A set of postulates for phonemic analysis*,¹⁸ where it is proposed that the input to a linguistic analysis need consist of nothing more than accurate recordings of utterances.

1.3.2 Objectives and methodological nature

Explicitly formulated discovery procedures were of great

concern to linguists working within this framework, and the grammar which resulted consisted essentially of lists of elements and classes of linguistic units. The goals of this type of analysis were therefore essentially classificatory, hence the term 'taxonomic'. A number of models or schools of thought were encompassed by the term *taxonomic*, amongst others (1) Structural Linguistics, (2) Descriptive Linguistics, and (3) Tagmemics.¹⁹ These models shared certain common properties,²⁰ and any differences that did exist, involved in the main, linguistic primes i.e. the linguistic units in terms of which language was described and/or the intentional definitions thereof.²¹ The methodological nature of this framework is well summarized by Maclay in the following quotation in which he refers specifically to the structuralists.²²

"[The---GP] structuralists proposed a model of grammar consisting of several different levels of analysis; the importance of keeping the levels separate being particularly emphasized. This device takes as initial input a body of observable linguistic data consisting of phonetically transcribed utterances along with judgments by native speaker informants as to the sameness or difference, primarily of pairs of words, but sometimes of longer phrases and sentences. It was argued that this primary data could be processed by explicit methods of analysis so as to produce an identification and classification of higher categories such as phonemes and morphemes. The model involves a strong linear directionality away from the primary data. This means that the input to each level must come entirely from the preceding level. One cannot, for example, use morphological information in the identification of phonemes. The approach is operational in that the higher abstract categories of the grammar must be clearly connected to observable data by a series of analytic procedures applied to that data. Thus a *phoneme*, while it might be roughly defined as a functionally significant class of sounds or phones

which does not bear meaning, is, strictly speaking, no more than the result of a set of operations performed on the primary data. The goals of this analysis are essentially classificatory, thus the term *taxonomic* is often applied to this school of linguistics. All of the operations are based on the notion of *formal distribution* which is for any element, the list of immediate environments defined by its co-occurrence with other elements of the same type."

He goes on to say:^{2 3}

"Perhaps because syntax is so far removed from the basic data, its position in a structural analysis is rather insecure."

The characteristic properties of the framework discussed above are reflected to a certain extent in Doke's works on Bantu languages. For example, in his analysis of the Zulu relative construction, a summary of which follows below, the importance attached to the notions of observation, intentional definition and classification is well manifested.

1.4 Doke's analysis of the relative construction^{2 4}

1.4.1 Introduction

Doke's analysis of the Zulu relative construction is summarized in this section under four sub-headings, namely:

- (i) The relative concord
- (ii) The types and sub-types of relative construction
- (iii) The enclitic formative *-yo*
- (iv) The relative construction used as pronoun.

For the purposes of this summary, I presume familiarity with certain terms and definitions of terms which are commonly used in the Dokeian model. Nevertheless, a few introductory statements would be in order here, with regard to the way in which Doke treats the category 'relative' in his overall classification of the Zulu 'parts of speech'.

In *Zulu Syntax and Idiom*, Doke says,²⁵

"The study of the grammar of a language may be roughly divided into three sections: (a) the phonology, a study of the sound components and their inter-relationships including the 'prosodic' elements of length, stress and tone; (b) the morphology or accidence, a study of word-formation and the inflexions which words may undergo; and (c) the syntax, a study of sentence-structure and the inter-relationship of words in the composition of sentences."

In his classification of the parts of speech in Zulu, Doke states that "it is the complete words, and not the individual parts composing words, which must be considered as 'parts of speech'."²⁶ Words, according to Doke, are,²⁷

"...MEANINGFUL UNITS OF SPEECH, CONSISTING OF ONE OR MORE SYLLABLES, ADHERING TOGETHER IN A UNITY OF ENUNCIATION, BY THE ATTRACTIVE FORCE OF A FULLY STRESSED SYLLABLE."

He claims that if each complete word in Zulu is taken as representing some part of speech, "according to the work which it does in the sentence,"²⁸ i.e. its function, then six *fundamental* parts of speech may be recognized, namely²⁹

(i) The Substantive

- (ii) The Qualificative
- (iii) The Predicative
- (iv) The Descriptive
- (v) The Conjunctive
- (vi) The Interjective

He adds that if these parts of speech are further examined "according to the form in which they appear,"³⁰ then further sub-divisions may be recognized. These sub-divisions, according to him, constitute the *real* parts of speech in Zulu:³¹

- | | |
|------------------------|-----------------|
| (i) The Substantive | (a) Noun |
| | (b) Pronoun |
| (ii) The Qualificative | (a) Adjective |
| | (b) Relative |
| | (c) Enumerative |
| | (d) Possessive |
| (iii) Predicative | (a) Verb |
| | (b) Copulative |
| (iv) Descriptive | (a) Adverb |
| | (b) Ideophone |
| (v) Conjunctive | |
| (vi) Interjective | |

As is evident above, Doke classifies the relative together with the adjective, enumerative and possessive under the *fundamental* part of speech called the qualificative. The qualificative, he defines as a word which qualifies a substantive, the latter being a word "signifying anything concrete or abstract, or any concept."³²

In the following examples, the underlined elements illustrate each of the four types of *qualificative* categorized by Doke:

- 1.1 *Umfana omude uzobuya* (Adjective)
 'Boy tall he-will-return'
 'The tall boy will return'
- 1.2 *Umama uthengela abantwana abaqotho ukudla* (Relative)
 'My-mother she-is-buying-for children honest food'
 'My mother is buying food for the honest children'
- 1.3 *Ugawule sihlahla sini?* (Enumerative)
 'You-cut-down tree what-kind?'
 'What kind of tree did you cut down?'
- 1.4 *Indodana yenkosi ihambile*
 'Son of-chief he-left'
 'The chief's son has left'

1.4.2 The relative concord

Doke gives an *intentional definition* of the relative,³³ stating that it is a word "which qualifies a substantive, and is brought into concordial agreement therewith by the relative concord."³⁴ Below is a list of relative concords as set out by Doke:

1st pers. :	sg. <i>engi-</i>	Class 4 :	sg. <i>esi-</i>
	pl. <i>esi-</i>		pl. <i>ezi-</i>
2nd pers. :	sg. <i>o-</i>	Class 5 :	sg. <i>e-</i>
	pl. <i>eni-</i>		pl. <i>ezi-</i>
Class 1 :	sg. <i>o-</i> ³⁵	Class 6 :	sg. <i>olu-</i>
	pl. <i>aba-</i>		pl. <i>ezi-</i>
Class 2 :	sg. <i>o-</i>	Class 7 :	<i>obu-</i>
	pl. <i>e-</i>	Class 8 :	<i>oku-</i>
Class 3 :	sg. <i>eli-</i>	Class 10 :	<i>oku-</i>
	pl. <i>a-</i>		

With regard to *the formation* of the relative concord, the following two alternative derivations are offered by Doke:³⁶

- (i) It may be derived from the adjectival concord. In instances where the adjectival concord contains a nasal consonant, both the nasal consonant and the vowel that follows it are elided. Where there is no nasal consonant in the adjectival concord, then the form of the relative concord is identical to that of the adjectival concord, e.g.

Adjectival concord

Relative concord

Class 2 : pl. *emi-*

>

e-

Class 4 : sg. *esi-*

>

esi-

- (ii) The alternative derivation involves two steps. The initial vowel of the relative concord is first formed by prefixing the so-called 'qualificative formative' *a-* to the vowel of the subjectival concord of the class concerned. Coalescence³⁷ of vowels then takes place whereby:

$a + a > a$

$a + i > e$

$a + u > o$

The resultant vowel is then either prefixed to the subjectival concord (in cases where the subjectival concord commences in a consonant) or it replaces the subjectival concord (in cases where the latter consists of a vowel only). Examples are given below:

Consonant commencing subjectival concord

Class 1 : pl. *ba-*

Coalescence of the qualificative formative a- and the vowel of this subjectival concord results in a-. This vowel is then prefixed to ba- producing the relative concord aba-.

Vowel subjectival concord

Class 2 : pl. *i-*

a- coalesces with i- to produce e- and this latter vowel replaces the subjectival concord. Hence the relative concord in this class is e-.

1.4.3 Types and sub-types of relative construction³⁸

Two types or sets of relative construction are distinguished by Doke, namely:

- (i) The relative construction of *direct* relationship
- (ii) The relative construction of *indirect* relationship

The categorization of the relative construction into these two types is determined, in terms of Doke's analysis, by the apparent agreement/non-agreement of the relative concord with the antecedent. In this regard, Doke states,³⁹

"Relatives, however, are divided into two distinct sets, those which have a relative concord in agreement with the antecedent [Direct Relationship---GP], and those which show that agreement, not in the relative concord with which they begin, but in some

other way [Indirect Relationship---GP]."

1.4.4 The relative construction of direct relationship

This type of relationship is divided into the following sub-types:

- (i) Those formed from relative stems
- (ii) Those formed from copulatives
- (iii) Those formed "by subjectival relationship with a subordinate verb."⁴⁰

1.4.4.1 Relative stems

In his discussion of relative stems, Doke notes that most relative stems are traceable to an original noun derivation. Few are primitive though, in the sense that they do not show derivation from any other 'part of speech.'⁴¹

Examples:

- <i>bomvu</i>	'red'	<	<i>ibomvu</i>	'red ochre'
- <i>buhlungu</i>	'painful'	<	<i>ubuhlungu</i>	'pain'
- <i>bukhali</i>	'sharp'	<	<i>ubukhali</i>	'sharpness'
- <i>makhaza</i>	'cold'	<	<i>amakhaza</i>	'cold'
- <i>munyu</i>	'acid'	<	<i>umunyu</i>	'acidity'
- <i>banzi</i>	'wide'			(primitive stem)
- <i>duma</i>	'tasteless'			(primitive stem)
- <i>qotho</i>	'honest'			(primitive stem)

1.4.4.2 Copulatives in relative relationship

Copulatives may be "brought into relative relationship with

substantives, by substituting the relative concord for the subjectival concord."⁴²

2. *Sinenkosi* [*engumfundisi*]
 'We-have-chief [RCon-(is)-teacher]'
 (RCon = Relative Concord)
 'We have a chief who is a teacher'
3. *Abantu* [*abasendlini*] *bangamaSwazi*
 'People [RCon-(are)-in-hut] they-(are)-Swazi'
 'The people who are in the hut are Swazi'

1.4.4.3 The relative construction formed by subjectival relationship with a subordinate verb

According to Doke, in this type of relationship, the subject of the subordinate verb may either be:

- (i) the *antecedent*, in which case the relationship is referred to as a *plain* relationship, or
- (ii) something that 'belongs' to the antecedent, in which case the relationship is called a *possessive* relationship.

In the case of a *plain* relationship, the antecedent is referred to in the relative construction by one morphological element only, namely the *relative concord*. In the case of a *possessive* relationship, on the other hand, there are two morphological elements in the relative construction which show agreement with the antecedent, namely the *relative concord* and an *absolute pronoun*. The latter always functions as a possessive stem. Examples of these two kinds of relationships are given below.

Subjectival relationship

Plain

4. *Indoda [ehleka kakhulu] inguthisha*
 'Man [RCON-laughs much] he-(is)-teacher'
 'The man who laughs a lot is a teacher'

Subjectival Relationship

Possessive

Doke notes that with this type of relationship, the relative predicate may assume one of three different forms.

5. *Inkosi [emntwana wayo {uyagula}] ihambile^{4 3}*
 {ogulayo}
 {ugulayo}
- 'Chief [RCon-child of-him { he-is-ill
 RCon-is-ill-EF
 he-is-ill-EF }] he-left'
 (EF = Enclitic Formative)
- 'The chief whose child is ill has left'

(It should be noted here that in sentence 5, the antecedent *inkosi* is referred to in the relative clause by both a relative concord e- and an absolute pronoun -yo, whereas in sentence 4, only the relative concord e- shows agreement with the antecedent *indoda*).

1.4.5 The relative construction of indirect relationship

Two sub-types of indirect relationship are recognized by Doke, namely:

- (i) objectival
- (ii) adverbial

As already noted, the relative concord in this type of relationship *never* refers to the antecedent. Instead, it refers to the subject of the relative predicate. An important observation concerning the form of the relative concords is that in this type of relationship the concords employed are identical to those found in direct relationship, with the exception of one class, namely class 1 sg. In this class, a- always occurs in relative constructions of indirect relationship whereas o- occurs in those of direct relationship.

Within each of these sub-types, a further distinction is made between plain and possessive relationships. An example of each of these different sub-types is given below.

Objectival relationship

Plain

In this construction, the antecedent is referred to by means of an object concord in the relative predicate, or by an absolute pronoun in instances where the verb takes two objects. The object concord and absolute pronoun are underlined in the examples below.

6. *Ngiphe incwadi [engiyibeke etafuleni]*
 'Me-give letter [RCon-it-put on table]'
 'Give me the letter which I put on the table'
7. *Indaba [obewungitshela yona] iliqiniso na?*
 'Story [RCon-were-me-tell it] it-(is)-true Int?'
 (Int = Interrogative word)
 'Is the story that you were telling me, true?'

Objectival relationship

Possessive

In this construction, the antecedent is referred to in the relative clause by means of an absolute pronoun which functions as a possessive stem. The absolute pronoun is underlined in the following example:

8. *Umntwana [esipheke ukudla kwakhe] uhambile*
 'Child [RCon-cooked food of-him] he-left'
 'The child whose food we cooked has left'

Adverbial relationship

According to Doke there are "various types of adverbial relationship into which the subordinate verb may be brought in relative construction."⁴⁴ The main types are as follows:

- (a) *Locative*
- (b) *Conjunctive*
- (c) *Instrumental*
- (d) *Agentive*
- (e) *Comparative*
- (f) *Positional*

Once again, each of these may be further sub-divided into plain and possessive relationships. In all cases the antecedent is referred to in the relative clause by means of an absolute pronoun. The latter functions as an adverbial stem in the case of plain relationships and as a possessive stem in the case of possessive relationships. Examples of each type are given below. The absolute pronoun which refers to the antecedent is underlined in every sentence.

*Locative relationship**Plain*

- 9.1 *Indlu [abafana abahlala kuyo] ikude*
 'Hut [boys RCon-live in-it] it-(is)-far'
 'The hut in which the boys live is far'

Possessive

- 9.2 *Umfundi [abantwana abahlala endlini yakhe] ufikile*
 'Student [children RCon-stay in-hut of-him] he-ar-
 rived'
 'The student in whose hut the children are staying
 has arrived'

*Conjunctive relationship**Plain*

- 10.1 *Isalukazi [ubaba akhuluma naso] singunesi*
 'Old-woman [my-father RCon- talks with-him] she-(is)-
 nurse'
 'The old woman with whom my father is talking is a
 nurse'

Possessive

- 10.2 *Isalukazi [ubaba akhuluma namadodana aso] singunesi*
 'Old-woman [my-father RCon-talks with-sons of-her]
 she-(is)-nurse'
 'The old woman with whose sons my father is talking
 is a nurse'

*Instrumental relationship**Plain*

- 11.1 *Ibhola* [*abafana abadlala ngalo*] *lisha*
 'Ball [boys RCon-play-with-it] it-(is)-new'
 'The ball with which the boys are playing is new'

Possessive

- 11.2 *Intombazana* [*abafana abadlala ngebhola layo*] *iyakhala*
 'Girl [boys RCon-play with-ball of-her] she-is-crying'
 'The girl with whose ball the boys are playing is crying'

*Agentive relationship**Plain*

- 12.1 *Umntu* [*engashaywa nguye*] *useboshiwe*
 'Person [RCon-was-hit by-him] he-now-is-arrested'
 'The person by whom I was hit is no

Possessive

- 12.2 *Nansi isihlahla* [*engahlatshwa ngameva aso*]
 'Here-is bush [RCon-was pricked by-thorns-of-it]'
 'Here is the bush by whose thorns I was pricked'

*Comparative relationship**Plain*

- 13.1 *Naso isitshudeni* [*umfowethu ahleka njengaso*]
 'There-is student [my-brother RCon-laughs like-him]'
 'There is the student like whom my brother laughs'

Possessive

- 13.2 *Isalukazi [umfowethu ahleka njengendodana yaso] singunesi*
 'Old-woman [my-brother RCon-laughs like-son of-her] she-(is)-nurse'
 'The old woman like whose son my brother laughs is a nurse'

*Positional relationship**Plain*

- 14.1 *Singalibona ibhilidi [ashaywe phambi kwalo umfana]*
 'We-can-it-see building [RCon-was-hit front of-it] boy '
 'We can see the building in front of which the boy was hit'

Possessive

- 14.2 *Indoda [abafana abadlala emva kwendlu yayo] ingudokotela*
 'Man [boys RCon-play behind of-hut of-him] he-(is)-doctor'
 'The man behind whose house the boys are playing is a doctor'

1.4.6 The enclitic formative -yo^{4 5}

Doke's observations concerning the occurrence/non-occurrence of this formative are summarized in the table below.

The peculiar behaviour of -yo appears to be governed by the

tense in which the relative verb occurs and also in some instances by the occurrence/non-occurrence of a following adjunct (indicated below by + and -adjunct respectively.)

Table 1

(The non-occurrence of *-yo* is signified in the second column by "—")

Tenses		Distributional nature of <i>-yo</i>
<u>Indicative mood</u>		
<u>Present tense:</u>	pos. (-adjunct)	obligatory
	(+adjunct)	optional
	neg. (-adjunct)	optional
	(+adjunct)	optional
<u>Future tense:</u>	pos.	—
	neg.	—
<u>Immediate past tense:</u>	pos. (with <i>-ile</i> suffix)	optional
	(with <i>-e</i> suffix)	—
	neg. (with <i>-ile</i> suffix)	—
	(with <i>-anga</i> suffix)	—
<u>Remote past tenses:</u>	pos. (-adjunct)	obligatory
	(+adjunct)	optional
	neg. (-adjunct)	optional
	(+adjunct)	optional
<u>Potential mood:</u>	pos.	optional
	neg.	—

construction, like all other qualificatives, may also either stand alone or occur before the substantive it refers to in word-order. In such cases, according to Doke, the qualificative "*becomes a qualificative pronoun,*"⁴⁷ e.g.

16. *Ebomvu iphandle*

'Red it-(is)-outside' (where *motorcar* is implied)

'The red one is outside'

17. *Ebov'imoto iphandle*

'Red-motorcar it-(is)-outside'

'The red one, motorcar that is, is outside'

1.4.8 Concluding remarks on the summary of Doke's analysis

Doke has, in his analysis, made significant observations concerning the relative construction in Zulu. According to him, the relative construction may be categorized into two types. This distinction is based primarily on morphological information, namely the agreement/non-agreement of the relative concord with the antecedent. When there is agreement, the relationship is said to be *direct*, but when no agreement exists, then the relationship is *indirect*. The two types of relationship are further divided into sub-types, and this latter division appears to be based on:

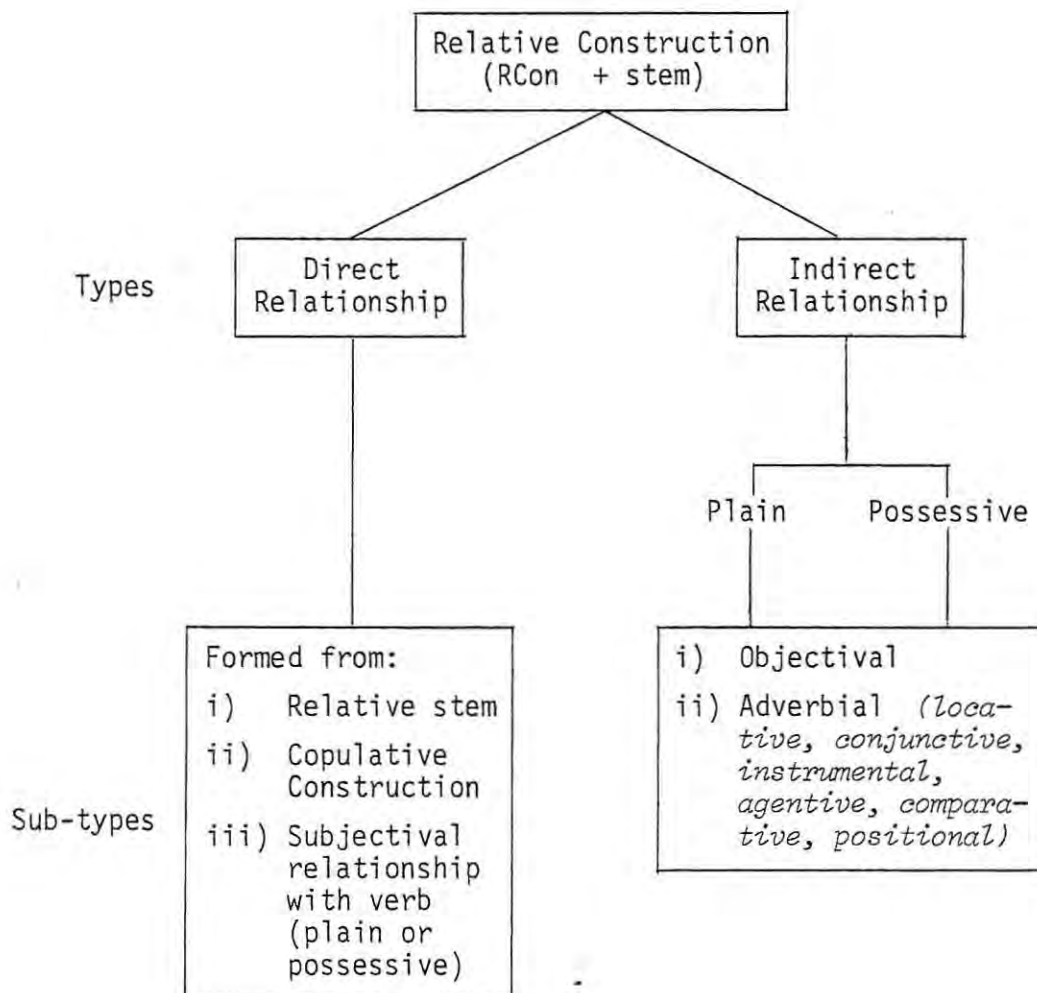
- (i) in the case of direct relationship, the syntactic word-class of the base of the relative predicate (whether it is, for example, a relative stem, a copulative construction or a verb)
- (ii) in the case of indirect relationship, the apparent

syntactic function that the antecedent performs with respect to the relative predicate (for example, objectival, adverbial).

Furthermore, the syntactic relationship that exists between the antecedent and the relative predicate may also determine whether the relationship is *plain* or *possessive*.

Thus in true taxonomic tradition, Doke recognizes numerous distinctions and these form the basis of his description and classification of the Zulu relative construction. His analysis may be schematically represented as follows:

Diagram 1



1.4.9 Significant issues arising out of Doke's analysis

1.4.9.1 Introduction

The contents of the preceding paragraphs demonstrate beyond doubt Doke's insightful knowledge of the relative construction in Zulu. Doke succeeded in achieving the objectives of the framework within which he was operating, by making relevant observations and by furnishing an adequate description and classification of the Zulu relative construction. However, in the light of modern linguistic theorizing, the *scientific* value of such a linguistic study is questionable.

In order to assess the merits of Doke's accomplishments, it would be necessary to view his analysis in terms of the methodological principles that underlie modern theoretical linguistics.

The relevance of an understanding of scientific principles in modern linguistic studies is attested, for example, in the following quotation taken from Botha:⁴⁸

"...it is impossible to discuss certain questions of present-day linguistics without having a sound knowledge of the philosophy of science."

Elsewhere, he says,⁴⁹

"The linguistic research of an increasing number of present-day linguists is governed by two general views. The first one is the general methodological or epistemological principle that extensive empirical knowledge about "language" or "linguistic structure" can only be sought in the framework of a particular well-defined linguistic theory or model..."

An analysis such as the one presented by Doke, would therefore be subjected to questions of the following type in modern linguistic theorizing:

Does this form of analysis satisfy the requirements of scientific inquiry?

In order to answer this type of question one would have to consider those aspects which characterize a grammatical study of a language as a *scientific study*. This would entail an investigation of certain methodological principles. As Hendrikse notes,⁵⁰

"If a discipline makes use of certain methodological principles then it is possible to state that the discipline is a scientific one, if not, then the discipline is non-scientific."

In Appendix I on page 263, an outline is presented of the methodological principles that underlie a scientific study. It is against the background information presented in this appendix, that the methodological inadequacies of an inquiry such as Doke's are discussed in the sub-section that follows.

1.4.9.2 The methodological inadequacies of an inquiry such as Doke's

The framework of analysis within which Doke worked is representative of an inquiry which terminates in the natural history stage i.e. it is pretheoretical. In terms of the goals of empirical science such inquiries are inadequate. They are characterized by descriptions which are set forth in terms of *inductive assertions* that are NOT TESTABLE. The fact that they are not testable also implies that they

lack PREDICTIVE POWER. Furthermore such descriptions do not have EXPLANATORY POWER. In his brief exposition of the goals of empirical science, Botha stresses the indispensability of these considerations in a complete scientific inquiry:⁵¹

"Firstly, although the relative importance of explanation can be debated, empirical science aims at providing, in one way or another, explanations for observed events. Secondly, statements of the empirical sciences must be testable. This is to say that they must be susceptible to confirmation or disconfirmation."

As already noted, Doke's analysis of the relative construction is essentially *classificatory* in its approach. In it he makes a number of significant observations, but as is to be expected from a work of this nature, *the phenomena observed are not explained.*

Botha states the shortcomings of such an analysis in the following way:⁵²

"A classificatory and explanatory approach to linguistics are not alternatives: both classification and explanation are necessary in complete scientific inquiry. Classification is performed in the pre-theoretical phase of scientific inquiry, while explanation is relevant to the theoretical stage."

On the question of explanation, Harré notes that "to give an explanation is to give the reasons for a happening."⁵³ He points out that when one is asked to explain happenings,⁵⁴

"...[He---GP] may either be asked to account for the happening or to make the questioner understand how it came about."

According to Harré, an explanation of a particular happening has the following features:⁵⁵

- "(i) It will give a reason for the happening by mentioning a certain feature or features of the antecedent situation.
- (ii) It will either imply or state directly the relevance of the feature or features in question to the happenings for which an explanation is wanted"

Furthermore, seeking an explanation of a happening involves looking for a generalization under which it (the happening) can be included:⁵⁶

"Looking for the explanation of a happening involves both looking for a generalization under which we can include the happening in question, and then with the help of this generalization identifying a cause [sic]."

In the process of *scientific inquiry* an occurrence of a phenomenon or event is explained by reducing it to a general rule or law.

Hypotheses are, inter alia, set forth to explain the occurrence of phenomena and events. Hendrikse notes the following in this regard:⁵⁷

"Observed facts explained by a certain hypothesis H_i is said to SUPPORT H_i to the extent that H_i is capable of explaining the observed facts. SUPPORTING EVIDENCE borne out by the explanation of problematic data by H_i is said to lend a higher initial plausibility or prior probability to H_i , than to other similar hypotheses. A hypothesis is therefore justified to the extent that it is capable of explaining problematic data."

Even though Doke's analysis lacks explanatory power, aspects of it initiate numerous thought-provoking questions which require adequate explanations. What follows here is merely a list of the types of questions that a grammarian could ask concerning the observations made by Doke on the relative construction. In the course of my analysis, an attempt will be made to provide presystematic explanations for these questions.

Q.1: What is the categorial status of the relative construction?

Q.2: What is the syntactic and semantic significance of the so-called 'qualificative' formative a-?

- Q.3: a. Why are there two relative concords in class 1 sg., viz. o- and a-?*
- b. Why does o- occur in relatives of direct relationship and a- in relatives of indirect relationship?*
- c. If the objectival possessive relationship is classified as a relative of indirect relationship, then why does the relative concord o- and not a- of class 1 sg. occur in the relative clause below, which is an example of such a relationship.*

18. Umntwana [okudla kwakhe sikuphekile]
uhambile

'Child [RCon-food of-him we-it-cooked] he-left'

'The child whose food we cooked has left'

- Q.4: *What is the syntactic and semantic significance of the enclitic formative -yo?*
- Q.5: *What justification is there for distinguishing between relatives of direct and indirect relationship?*
- Q.6 *On what grounds is the distinction between plain and possessive relationship justifiable?*

I believe that the provision of adequate explanations to questions of the type set out above, will, inter alia, contribute to the fulfilment of the objectives of my study as set out in 0.2.

CHAPTER 2Perspectives on Theoretical Issues
in RelativizationSynopsis

In this chapter a cursory survey is presented of certain issues relating to relativization phenomena. The survey includes reference to each of the following:

- (i) An outline of selected theoretical issues which have been explored within the generative paradigm. This involves an investigation of relevant problems as well as an extraction of certain crucial features that characterize the solutions to these problems.*
- (ii) In order to provide a more generalized picture of some of the major issues involved in relativization, attention is given to certain non-formal i.e. pragmatic and functional concepts, since such concepts have been shown by some linguists to be relevant for an adequate understanding of relativization phenomena.*
- (iii) Certain typological characteristics of RCs are also considered since such*

characteristics yield cross-linguistic generalizations which in turn reflect significantly on such notions as 'linguistic universals' and are also considered to contribute to an understanding of the nature of RCs.

Even though most of the detailed generative descriptions of relativization in the various languages have been undertaken within the Standard Theory (ST) and/or the Extended Standard Theory (EST), both these theories have in recent years been superseded by the Revised Extended Standard Theory (REST). This latter version is commonly referred to as Core Grammar and since it represents the most recent advances in generative linguistic theorizing, an outline of its organization and structure could at present be considered necessary for any study that ultimately aims at a construction of a theory of relativization. In section 2.3 of this chapter only those aspects of Core Grammar that are considered relevant for the process of relativization are outlined. However, in order to facilitate the discussion in this section an outline of the organization and structure of Core Grammar is presented in Appendix 2 on page 273ff.

2.1 What is an RC?

Various *formal* and *non-formal* considerations have been assumed in the identification or labelling of clauses as RCs in various languages.

In the paragraphs that follow an outline is given of a number of significant aspects relating to each of these various considerations.

2.1.1 Semantic considerations

In his typological work entitled *Relative Clause Structure*, Downing recognizes three semantic universal properties of RCs.¹ These are outlined below:

- a. "A relative clause incorporates, as one of its terms, a nominal which is coreferential with a nominal outside of the clause. Neither nominal need be expressed overtly, although presumably one or the other must."²

Downing illustrates various possibilities in English regarding the occurrence or non-occurrence of coreferential NPs. A few examples are given below. (In each of these examples, the coreferential nominals are underlined.)

- 1.1 The car [I saw \emptyset] was green.
- 1.2 I haven't found \emptyset [what I was looking for.]
- 1.3 The girl chose the ring [which cost the most.]

As Downing notes, the nominal in the RC, which he calls the relative NP (Rel NP), may also be 'co-referential' with an entire clause in which case one may speak of an *antecedent clause*.

1.4 They locked up all the children, (which pleased their parents.)

- b. The second semantic property listed by Downing is that an RC is an assertion about the Rel NP. This point is of significance since it implies that whatever is true of the Rel NP is also true of the Antecedent NP (ANT NP) by virtue of the property stated in (a) i.e. that the Rel NP is *coreferential* with the ANT NP of the RC.
- c. Finally, the third property is referred to as "the functional property of modification."³ This property applies only to some RCs and such clauses are generally referred to as *restrictive* relative clauses (RRCs). (These clauses are generally distinguished from so-called *non-restrictive* (Non-RRCs) or *appositive* clauses, which will be discussed in 2.2ff.

2.1.2 Syntactic considerations

Downing notes that while a universal semantic definition can be provided for the notion *relative clause*, there is no single set of syntactic properties by which RCs can be identified as a *universal syntactic category*.

According to him, even the possibility of defining RCs as having shared properties at a more abstract level,

encounters certain difficulties. He states, for example,⁴

"...the deep structures posited in order to account for surface forms in various languages differ from language to language at least with respect to the positioning of relative clauses in larger structures. Attempts to justify a common deep syntactic representation for relative clauses in all languages (e.g. Bach 1965) have not escaped arbitrariness, at least with respect to ordering of elements. Not only do relative clauses precede other elements within a single NP in some languages and follow in others; in some languages, as we shall see, relative clauses do not enter into nominal constituents at all at the surface level, so that there is no motivation for deriving them from an embedded position in deep structures in those languages.

These facts suggest that a universal characterization of the notion 'relative clause' can only be given in semantic terms."

Yet, despite the abovementioned irregular nature of RCs, Downing affirms that a number of implicational generalizations can be made concerning the *surface syntactic form* of RCs.⁵ For example, he notes that a correlation exists between the position of the RRC in a sentence and its internal structure on the one hand and between its position and the dominant word order type of the language in question on the other.⁶ It is hoped that the results of my study will contribute to the typological findings already made in this regard.

2.1.3 Pragmatic considerations

There has been of late a growing interest in, and an increasing awareness of the study of discourse-pragmatics,

and the decisive role it plays in explaining the syntax of human language.

Zeno Vendler in his review of Peter Cole's (ed.) *Pragmatics* sums up the importance of pragmatic contributions in the following way:⁷

"As the generative semanticists have shown that syntax and semantics are inseparable, so these contributions tend to demonstrate that not even these two aspects combined can be viewed as a closed system: the rules of syntax and semantics are open and underdetermined, to suit the exigencies of actual communication. Language is like a game, we are often told; but if so it is a game with soft rules: not like chess, played on a board of abstract geometry, but rather like golf, to be played on this actual course or that."

Certain linguists, inter alia, Talmy Givon have adopted extreme positions with respect to the importance of considering pragmatic issues in the study of language. In this regard, he states, for example,⁸

"...one is prompted to ask whether syntax has any independent existence [sic] apart from discourse structure."

Elsewhere, he says,⁹

"If language is an instrument of communication, then it is bizarre to try and understand its structure without reference to communicative setting and communicative function. Therefore, grammatical constraints, rules of syntax, stylistic transformations, and the like are not there "because they are prewired into the genetic code of the organism". Nor are they there for no reason at all. Rather, they are there to serve highly specific communicative functions."

With respect to the nature of *RCs*, the importance of a pragmatic/functional approach to the analysis of certain phenomena has been advocated by a number of linguists. Kuno,¹⁰ for example, has shown that an *RC must be a statement about its head noun* and claims that only *themes* can be relativized. He has also adequately shown that the speaker's attitude towards the participants in the event or state described in the *RC*, and his attitude towards the event or state described in the matrix clause, are important factors that determine the degree of grammaticality of sentences involving *RC* constructions. He consolidates his stand on the adoption of a functional approach to relativization phenomena in his concluding paragraph:¹¹

"Much (in fact, too much) has been done in search of syntactic phenomena that, I believe, are basically controlled by nonsyntactic factors. By taking a purely syntactic approach, one can achieve a certain degree of success in one's analysis if semantic factors have consistent syntactic realizations with respect to concepts such as subject, object, etc., or with respect to command and precedence relationships and relative heights in constituent structures. However, such an attempt fails crucially where the underlying semantic factors do not show one-to-one correspondence with syntactic factors. It is time to reexamine every major "syntactic" process and every major "syntactic" constraint from a functional point of view, to find semantic explanations for its existence in case the syntactic characterization holds, and to find a deeper and more accurate semantic generalization in case the syntactic facts are simply superficial and "almost correct" syntactic manifestations of nonsyntactic factors."

2.1.4 Relational considerations

The fundamental tenet of these considerations is that the grammatical relations of NPs play a central role in the syntax of natural languages.¹² Keenan and Comrie have invoked relational notions in their setting out of an Accessibility Hierarchy (AH), which, according to them, "expresses the relative accessibility to relativization of NP positions in simplex main clauses."¹³ They note that "different strategies differ with regard to which NP positions they can relativize"¹⁴ and consequently generalizations concerning the relativizability of different NPs must be made dependent on the strategies used. They further argue that:¹⁵

"...languages vary with respect to which NP positions can be relativized, and that the variation is not random. Rather, the relativizability of certain positions is dependent on that of others, and these dependencies are, we claim, universal."

They set out a number of Hierarchy Constraints (HC) which according to them, any grammar of a human language must meet and they support their claims by proposing the following explanation:¹⁶

"The AH directly reflects the psychological ease of comprehension."

A possible hierarchy of psychological accessibility introduces a fascinating dimension in the understanding of certain relativization phenomena. It would, however, be beyond the scope of this thesis to venture into the psychological implications concerning the formation of Zulu RCs. Nevertheless, I wish to show to what extent the AH applies to the surface forms of RCs in Zulu, and in this respect

I hope to contribute to certain universal properties of RCs as advocated by Keenan and Comrie.

2.2 Types of RCs

In the literature two types of RCs are generally recognized, namely Restrictive Relative Clauses (RRCs) and Non-Restrictive Relative Clauses (Non-RRCs), also called Appositive Clauses. Once again, formal as well as non-formal considerations have been assumed in distinguishing these two major types. Aspects relating to these various considerations are dealt with below.

2.2.1 Semantic considerations

Many semantic definitions have been entertained regarding the two abovementioned types of RCs. In addition, the formal differences between the two types have been dealt with at length in the literature.¹⁷ It is not my intention here, nor in the succeeding sub-sections to *evaluate* various authors' viewpoints on the topic at hand, but rather to present an *outline* of some of the more generally accepted assumptions, even if such assumptions are regarded as questionable or debatable.¹⁸

Generally speaking, RRCs are commonly believed to express an assertion about some individual or class, with the function of restricting the reference of the ANT NP to those possible referents of which that assertion is believed to be true.

Keenan and Comrie offer the following intentional definition of RRCs:¹⁹

"We consider any syntactic object to be an RC if it specifies a set of objects (perhaps a one-member set) in two steps: a larger set is specified, called the *domain* of relativization, and then restricted to some subset of which a certain sentence, the *restricting* sentence is true."

Given the definition above, the clause in the English sentence below can be identified then as an RC:

2. "The student whom my mother likes is ill"

In terms of Keenan and Comrie's definition two significant observations can be made with reference to 2, namely:

- (a) That there is a set of referents which represents the domain of relativization. In sentence 2 the set of referents is *students*.
- (b) That the set of referents, 'students', is restricted to only one individual of whom the restricting sentence *whom my mother likes* is true.

Non-RRCs on the other hand, are generally assumed to provide additional information about the ANT NP, without restricting the domain of reference of the latter in any way. So, for example, in a sentence such as the following, where the RC is underlined,

3. The children, who have green tickets, will be admitted free

it is stated that all the children will be admitted free, since according to this sentence they *all* have green tickets. The ANT NP is here not restricted by the RC. The only restriction on this NP is that imposed by the so-called definite article *the* which limits the reference

to a previously identified class of all or some children. The Non-RRC *who have green tickets* expresses an independent assertion; it merely provides additional information concerning the referent of the ANT NP.²⁰

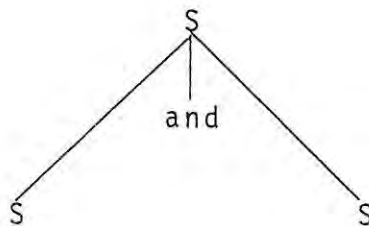
From a typological viewpoint, Downing notes that the properties of Non-RRCs in general are quite different from those of RRCs across languages. There is one absolute generalization according to him, which appears to be justified, and that is that "all languages make use of restrictive relative clauses (as semantically defined)."²¹ This cannot be said of Non-RRCs since there are languages in which this latter type of clause is apparently not manifest.

2.2.2 Syntactic considerations

Downing notes that in some languages RRCs and Non-RRCs are syntactically quite distinct, and yet in others they are indistinguishable. With respect to English RCs, Jackendoff affirms that the differences in intonation, complementizer (i.e. the introducing element) and distribution between the two types, argue rather strongly that they have different syntactic sources.²² The sources most commonly entertained in the literature involve the processes of coordination and subordination. The process of coordination is commonly assumed to underlie Non-RRCs²³ and is generally referred to as the *Deep Structure Conjunction Analysis*. The process of subordination, on the other hand, is assumed to underlie RRCs only and is referred to as the *Deep Structure Embedded Analysis*. As will be noted, however, the precise details associated with each of these analyses with respect to the derivation of RCs, remains an enigmatic issue. Relevant characteristics of the two analyses may be summarized as follows:

The Deep-Structure Conjunction Analysis - This analysis involves the conjoining²⁴ of two sentences and may be illustrated by a P-marker of the following kind. (This P-marker is over-simplified since details do not concern us here).

Diagram 1



The Deep Structure Embedded Analyses - In terms of this analysis an RC in the underlying representation of a sentence occurs embedded in another constituent. Differing views however have been offered concerning the form of embedding that exists i.e. linguists have differed as regards the category under which the embedded sentence occurs. These differing views will be discussed in 2.2.2.1.

Details aside, the appropriate P-marker would have a form similar to the following, where S_2 represents the embedded sentence, i.e. the RC, and the encircled position the constituent category which dominates S_2 .

Diagram 2

2.2.2.1 The underlying or base structure

Even though a number of alternative analyses have been developed to account for the peculiar properties of RCs, there is nevertheless one syntactic property that is not debatable and is common to all analyses. This property relates to the fact that relativization is regarded as one of the creative recursive processes of human language. This phenomenon of creativity is represented in the theory by the recurring symbol S.²⁵

The problem that concerns us here is the one relating to the *categorial status of this recurring S*. In other words, under which constituent category in a phrase marker is the recurring S introduced?

If the deep structure conjunction analysis is adopted then the position of the recurring S is not problematic. The rule generating such a structure would have a form similar to the following, where S₂ underlies the RC:

$$S \longrightarrow S_1 \text{ Conj. } S_2$$

If, however, the deep structure embedded analysis is adopted, certain problems arise, since there appear to be various alternative categorial statuses that an RC can assume, each with its own implications. It is in this regard that a number of alternative analyses have been drawn up within the ST and EST. The most well-known have been labelled as follows:²⁶

- (i) the ART-S or 'Determiner' theory/analysis
- (ii) The NP-S or 'Chomsky-adjoined' theory/analysis
- (iii) The Nom-S or N-S analysis

(An additional analysis which differs markedly from the above three is commonly referred to as the 'head-raising' analysis. This analysis involves the 'raising' of a noun phrase from the RC into the main clause).²⁷

Since much has appeared in the literature on the features which characterize each of the above, it would be unnecessary here to present a methodological analysis of the various arguments in support of any one alternative or of the disconfirmatory arguments developed by various authors against any particular one. What follows is a non-critical outline of relevant issues that arise from some of these analyses.

We may begin by stating that there must be a reason why different alternative analyses are developed in order to solve any particular problem. With respect to the problem at hand we may therefore pose the question:

Why are different categorial statuses assigned to

RCs in the different analyses?

There appear to be at least two significant *empirical* factors which underlie the development of different answers to the above question:

The first relates to the *syntactic function* of an RC in a sentence. In other words, the question that faces the linguist in this regard is:

What is the categorial status of an RC?

The second relates to a phenomenon commonly referred to as *coreferentiality*, whereby an element or elements within an RC is/are claimed to refer to the same referent(s) as an element or elements outside the RC. The question that faces the linguist here is:

How can this identity or anaphoric relationship be accounted for in the underlying structure?^{2 8}

Since the above two factors have played a significant role in the determination of the various analyses that have been drawn up, the importance of considering them in an investigation of Zulu RCs cannot be overlooked.

2.2.2.2 Surface forms of RCs and the rules involved in their derivation

The fact that different analyses have been developed regarding the underlying structure of RCs, implies in effect that certain transformational rules could apply in some cases and not in others. Nevertheless, a few generalizations

may be made in this respect, at least as far as English is concerned, since there appear to be certain specific processes that are *common to all analyses* in the derivation of the surface forms of RCs. These processes may be summarized as follows:

- (i) The *deletion* or *pronominalization* of the identity or coreferential element in the constituent S
- (ii) The *movement* of the *pronominalized* element²⁹

With respect to (ii), a number of constraints have been formulated whereby the movement of certain elements is blocked. These include, inter alia, the Complex NP Constraint, the Sentential Subject Constraint, and the Coordinate Structure Constraint.³⁰

It is in the study of the surface forms of RCs that certain linguists/grammarians have introduced non-formal notions to explain certain phenomena. These notions, regarded in transformational writings as being non-syntactic, or beyond the scope of sentence grammar, cannot be overlooked in this thesis, for reasons already mentioned. Some of the important contributions made in this regard are considered in the paragraphs that follow.

Keenan and Comrie (1977) have made certain valid observations concerning the surface forms of RCs:³¹

"...not only do different languages vary with respect to the way RCs are formed, but also within a given language there is often more than one distinct type of RC."

They refer to the distinct ways of forming RCs as different relative clause forming *strategies* and claim that since there are many ways in which RCs differ at the surface, there

exist many possible criteria for determining when any two strategies are different. In their study they choose two criteria:³²

"The first concerns the way the head NP and the restricting clause are distinguished at the surface, and the second concerns how the position relativized is indicated."

In her work (1971), Thompson adequately shows how information which relates to the *presuppositions* that a speaker has about the hearer's shared knowledge, contributes to the postulation of the underlying structure of RCs. She proposes, for example, that a coordinate structure like 5 below underlies sentence 4 which incorporates an RRC.

4. I met the girl who speaks Basque

5. (I met girl)(girl speaks Basque)

She notes that the choice of the clause which is to become the RC correlates with certain suppositions on the part of the speaker about what the hearer knows, and accordingly with the choice of the determiner.

Thus, for example, if the speaker presupposes that the hearer knows neither about his meeting a girl nor about a girl's speaking Basque, then both of the following conjunction realizations of 4 are acceptable:

6. I met a girl and she speaks Basque

7. There's a girl who speaks Basque and I met her

In addition the following two sentences that contain RCs with indefinite head nouns are also acceptable:

8. I met a girl who speaks Basque

9. A girl I met speaks Basque

If on the other hand, the speaker presupposes that there is a girl such that it is known by the hearer that he met her, the resultant sentence would be as follows:

10. The girl I met speaks Basque

Similarly, if the speaker presupposes that his hearer knows about the girl who speaks Basque, the following would pertain:

11. I met the girl who speaks Basque

An implication of the above observation, according to Thompson is that:³³

"...the distinction then, between the 'matrix' and 'constituent' sentences in a relative clause structure can be seen to be related to nothing in the structural portion of the representation of such sentences."

The meaning difference between 10 and 11, in other words, is not a function of the fact that the matrix and constituent sentences have been interchanged; if that were the case, then the same meaning difference would be expected to characterize the pair 8 and 9. With respect to sentences 10 and 11, the difference in meaning, according to Thompson, concerns the function of the presuppositions which the speaker has about the extent of the hearer's knowledge.

Once again, considerations such as the above need to be borne in mind when relativization phenomena in Zulu are investigated.

2.3 Recent developments in the general linguistic theory

Anyone familiar with the theory of transformational generative grammar will appreciate some of the difficulties that face a grammarian who wishes to conduct a grammatical inquiry within this theory. While the fundamental assumptions of the theory have remained basically unchanged over the years, its overall organization has undergone numerous modifications, and this has resulted in the development of various models or versions.

In the previous sub-section, references to the formal theory were constrained to the earlier versions of transformational generative grammar, namely the Standard Theory (ST) and the Extended Standard Theory (EST). In Appendix 2 on page 273, an outline is presented of the organization of the most recent version of the theory, namely Core Grammar. The appendix represents an attempt to consolidate the contents of several publications that have appeared on this version.³⁴ From the contents of this appendix, three issues may be isolated which, I believe, would need particular attention when a theory of Zulu relativization is ultimately constructed. These three issues may be outlined as follows:

- (i) *The categorial status of RCs* - This will involve an investigation of the way in which RCs are developed in the phrase structure rules
- (ii) *The properties of the complementizer system* - This will involve an investigation of the elements/complementizers that may be incorporated in the COMP node
- (iii) *The nature of anaphoric relations* - This will involve an examination of those elements in an RC

that are anaphorically bound by elements outside an RC.

These three issues will be discussed in the section entitled *Prolegomena to a theory of Zulu relativization within Core Grammar* on page 229. This section follows my pretheoretical analysis of Zulu RCs.

PART 2

A PRETHEORETICAL ANALYSIS OF RELATIVE CLAUSES IN ZULU

"While observed facts and facts deduced from facts are the flesh and bone of scientific inquiry, its heart and soul is creative speculation about the facts."

Givon¹

Organization and scope

The various chapters of PART 1 provide the historical and theoretical background for the contents of PART 2. In this PART an examination of Zulu relativization phenomena is conducted. The analysis is primarily presystematic in nature, and one of the major aims is to explore some possible answers to the various questions raised in 1.4.9.2 concerning the structure and nature of Zulu RCs.

The investigation is guided to a large extent by a consideration of functional, typological, relational, ontological and perceptual phenomena associated with the problematic areas identified. These linguistic phenomena are in principle fully or partly excluded from current theorizing within generative grammar. In this study, however, I hope to show that non-formal considerations play a significant role in the explanation and thus an understanding of problematic data in Zulu relativization. I believe that a theory of Zulu relativization which excludes such non-formal concepts would be demonstrably deficient in exactly these areas. By considering both formal and non-formal

(i.e. functional, typological, ontological etc.) phenomena in the investigation of Zulu relativization and related grammatical constructions, this study is conceived within an as yet non-existing coherent framework of current developments outside the strict formal approach of transformational generative grammar. Newmeyer summarizes the trend that has taken place, and which has characterized recent studies, as follows:²

"Initially, the [non-formal---GP] phenomena were dismissed from being worthy of investigation by linguists at all, often with the unstated implication that they are unamenable to ANY type of systematic study. Then, the exact opposite position was taken by many, as formal grammar itself was broadened to incorporate them. More recently, a synthesis of these two counterposed positions has become quite popular, as a number of linguists have readopted the position that the domain of formal grammar is limited and its properties constrained, yet argue that the formal properties of the independent systems governing the behavior of these phenomena are amenable to systematic study, as is their interaction with the theory of grammar."

Thus this study should in some way also be construed as an investigation of the viability of a synthesis of formal and non-formal phenomena in a systematic linguistic analysis.

In this presystematic investigation, an attempt will be made to isolate those phenomena and properties of phenomena, both formal and non-formal, which, in my opinion are relevant, if not crucial, for a systematic understanding of Zulu relativization phenomena. If the relevancy of these phenomena and properties could be demonstrated, then a synthesis of these must feature in the construction of a theory of Zulu relativization.

Introductory remarks on Relative Clause Types

In 1.4, a typical taxonomic analysis of the Zulu relative construction was presented. Certain inadequacies of such an analysis were noted, and numerous questions were raised regarding the structure and nature of the relative construction - questions which an analysis such as Doke's did not attempt to answer, and in terms of its objectives and methodological nature, could not answer. In these chapters, I reconsider, *inter alia*, the questions raised in 1.4.9.2, and explore and develop some possible answers to them in terms of non-formal linguistic concepts.

By way of introduction to the contents of these chapters, certain significant aspects relating to the nature of Zulu RCs are here outlined.

Keenan and Comrie have noted that "not only do different languages vary with respect to the way RC's are formed, but also within a given language there is often more than one distinct type of RC."³ In this presystematic study, the different RC formations in Zulu are, *inter alia*, investigated. The need to recognize three basic different types of RCs is argued for, and it is shown that a correlation exists between the type of RC employed in Zulu and the nature of the ANT.⁴ An investigation of the nature of ANTs reveals the need to recognize different categories of ANTs as well in the study of Zulu relativization. In fact it is shown that the type of RC employed in Zulu is determined by the category of ANT used.

Three different categories of ANTs are distinguished in this study, namely:

- (i) Nominal ANTs, involving the traditional categories, noun and pronoun,⁴
- (ii) Temporal ANTs, involving the traditional category, adverbial phrase of time, and
- (iii) Locational ANTs, involving the traditional category, adverbial phrase of place.

Corresponding to each of these categories of ANTs, the three types of RCs recognized are appropriately termed:

- (i) Nominal RCs
- (ii) Temporal RCs
- (iii) Locational RCs

These three types are represented in the sentence below.

(In the literal translation below, RCon represents the term 'relative concord' as used by Doke,⁵ and RS, the relative suffix. In the course of this presystematic analysis I argue for a renaming of the term 'relative concord', but for the time being Doke's terminology is used in this regard).

- (i) Nominal RC

Inja [umfana ayithengileyo] iyagula
 'Dog [boy RCon-it-bought-RS] it-is-ill'
 'The dog that the boy bought is ill'

- (ii) Temporal RC

Ngizobabona [nxa befika kusasa]⁶
 'I-will-them-see [when they-arrive tomorrow]'
 'I will see them when they arrive tomorrow'

(iii) Locational RC

Indawo [lapho abafana behlala khona] ikude
 'Place [where boys RCon-live there] it-is-far'
 'The place where the boys live is far'

The three types of RCs represented in the above examples differ from one another in their formation. Keenan and Comrie refer to the distinct ways of forming RCs as different RC forming strategies.⁷ In this study, the properties of the strategies employed in the formation of the three types of Zulu RCs are investigated. As will be pointed out, RCs belonging to a specific type may also assume various surface forms. So, for example, in the case of Nominal RCs, several surface forms may be distinguished. Their properties as well as the reasons that underlie their different formations are also investigated in these chapters.

As already mentioned, for the purpose of this investigation, non-formal concepts are invoked in order to explore various problematic issues that arise. Thus, for example, it is shown that the identification of different types of RCs in Zulu is related to an independent cognitive concept which relates to an understanding of the way in which the universe is construed by the human organism.

It is also shown that an understanding of the significance of, for example, the relative suffix -yo or the 'qualificative formative' a-, cannot be adequately developed without some reference to a typological perspective on the facts presented. As will be noted furthermore, the role of grammatical relations in RC formations is also considered. Finally, the importance of considering functional as well as perceptual notions in the interpretation of sentences that contain RCs, is examined.

CHAPTER 3

Nominal Relative Clauses - A reexamination of
the so-called 'Relative Concord'

Synopsis

In section 1.4.2 of Chapter 1, a summary was presented of Doke's analysis of the so-called 'relative concord'. In this chapter a reexamination of this concord is conducted. Its constituent parts are isolated and their significances explored. The relationship that is purported to exist between the relative concord and the demonstrative pronoun is also investigated. It is shown that these two forms are, in fact, related by virtue of the occurrence of the formative a- contained in each of them. An investigation of the inherent significances of the formative a- is then undertaken, and as a result certain important facts concerning the categorial status of Zulu RCs are revealed. It is furthermore shown that there are two Nominal RC forming strategies in Zulu which are distinguished in terms of the location of the formative a-. These strategies are explored in terms of the Accessibility Hierarchy (AH) set out by Keenan and Comrie. Their findings on the hierarchy are then reexamined in the light of the Zulu data, and it is shown that perceptual considerations, and not just NP functions, play a significant role in understanding the employment of different RC forming strategies.

3.1 Introduction

As noted in 1.4.2, Doke defined the category 'relative' as a word "which qualifies a substantive, and is brought into concordial agreement therewith by the relative concord."⁸ From the discussion that followed in that section, it was clear that Doke recognized the *composite* nature of the relative concord in Zulu. Two possible derivations of this concord were offered by him. The one involved derivation from the adjectival concord and the other, the affixing of a so-called 'qualificative formative' a-, onto a subjectival concord. In this section, the apparent composite nature of the relative concord is reexamined. Attention is paid to the syntactic and semantic properties of each of the constituent parts of the so-called 'relative concord' and it is shown that an investigation of the properties of the 'qualificative formative' a- in the relative concord, can ultimately contribute to a clarification of certain aspects concerning the categorial status of RCs in Zulu.

At the outset I should like to clarify certain terminological matters which emerge from the literature, and which, I believe, reveal serious misconceptions concerning the significances of the so-called 'relative concord' and its parts. Hopefully, such a clarification may contribute to an understanding of the real significances of these formatives.

3.2 A clarification of terminological issues

There does not appear to be any consistency in the literature concerning the terms used to refer to the underlined element in the sentence below, and this has led to a

certain amount of confusion.

1. *Isitshudeni* [*esifunda kakhulu*] *sizophumelela*
 'Student [RCon-studies much] he-will-pass'
 'The student who studies a lot will pass'

As already noted, Doke refers to the underlined element in the sentence above as a relative concord. Other terms that have been used are, inter alia, a 'relative pronoun', a 'descriptive concord' ('omskrywingskakel'), a 'qualificative relative word' ('kwalifikatiewe betrekkingwoord') and a 'relative particle.'⁹

What confuses the picture even more is the fact that similar terms, and in some cases, identical terms have been employed to refer to only the *initial part* of the underlined element, i.e. the part referred to by Doke as the 'qualificative formative'. This formative which, as already noted, has the form a-, has been called, inter alia, a 'relative morpheme', a 'relative pronominal morpheme', a 'relative pronoun', a 'relative marker', a 'relative particle', a 'relative' and a 'relative vowel'.¹⁰

As regards the second part of the underlined element in sentence 1, a more uniform picture emerges from the literature, the term 'subjectival concord' being generally accepted.¹¹

The use of so many different terms to refer to the composite element in sentence 1, constitutes perhaps the reason why such a serious misconception has prevailed in the literature concerning the significance/significances of this element. It would be appropriate here to comment on the misuse of some of these terms.

Hendrikse has adequately shown the misconception implied by terms such as 'relative concord' and 'relative pronoun' in the analysis of Xhosa RCs.¹² I should like to reiterate and amplify some of his viewpoints especially those that apply to Zulu RCs.

Recall once again Doke's intentional definition of the 'relative', whereby he states that it qualifies a substantive *and is brought into concordial agreement therewith by the relative concord*. Doke here implies that the relative concord is a formative that agrees in class with the substantive that is qualified (i.e. the ANT). This could be illustrated, for example, in the following sentences where the relative concord in each case agrees with the ANT. The relative concord and the ANT are underlined in each sentence.

2. Abafana [abasebenza esitolo] bahambile
 'Boys [RCon-work in-shop] they-left'
 'The boys who work in the shop have left'

3. Isitshudeni [esifike izolo] sifunda isiSuthu
 'Student [RCon-arrived yesterday] he-studies Sotho'
 'The student who arrived yesterday studies Sotho'

However, this apparent agreement in class between the relative concord and the ANT is not evident in the so-called 'indirect relative' constructions, discussed in 1.4.5. Consider, for example, the following sentences which incorporate such constructions. The ANT and the relative concord are underlined in each case.

4. Izinja [abafana abazithengileyo] ziyagula
 'Dogs [boys RCon-them-bought-RS] they-are-ill' (RS = Relative Suffix)
 'The dogs that the boys bought are ill'

5. *Othisha* [*intombazana ekhuluma nabo*] *bafundisa isi-Fulentshi*

'Teachers [girl RCon-talks with-them] they-teach French'

'The teachers with whom the girl is talking teach French'

In both these examples, the relative concord does *not* agree in class with the ANT but rather with the *subject of the relative predicate*, which in 4 is *abafana* and in 5, *intombazana*. If there was agreement between the relative concords and the ANTs in these two sentences, then the relative concords, *ezi-* and *aba-* would have occurred respectively.

The term 'relative concord' to refer to these formatives is therefore inappropriate, at least as far as so-called 'indirect relative' constructions are concerned.

The term 'relative pronoun' when used to refer to the same underlined element in sentence 1 is also misleading. In transformational theory parlance, this term is generally used to refer to the *replacement* of an NP that is coreferential with the ANT. Langacker, for example, characterizes English relative pronouns as follows:¹³

"*Which* is the relative pronoun that substitutes for noun phrases designating nonhuman entities. *Who* is in general restricted to noun phrases designating humans, as in *the woman who came to see me*. The relative pronoun *that* can replace either but cannot follow a preposition; *the woman that I love* and *the books that I burned* are both well-formed, therefore, but *the brick with that I broke the window* is ungrammatical."

Thus if the term 'relative pronoun' is taken to refer to a *pronoun* that is derived by a rule which takes as its input a structure containing an NP that is coreferential with the ANT, then there appears to be something amiss with the use of this term, at least as far as Zulu RCs are concerned. In this connection an anomaly arises once again with the so-called 'indirect relative' construction. Consider, for example, the following sentence:

6. *Izinja [abafana abazithengileyo] inyamalele*
 'Dogs [boys Rel Pro-them-bought-RS] they have disappeared' (Rel Pro = Relative Pronoun)
 'The dogs that the boys bought have disappeared'

In this sentence, coreferentiality with the ANT is indicated in the RC by means of an object agreement marker *-zi-*. The underlined element *aba-* does not refer anaphorically to the ANT, and may thus not be regarded as a replacement of the ANT. Thus it is incorrect to use the term 'relative pronoun' to denote the underlined element in examples such as 6 above.

The term 'qualificative' to refer to the same element is, for the purposes of my study, unacceptable since its employment would presuppose a descriptive framework involving the traditional part of speech called the 'qualificative'. The same applies to the use of the term 'descriptive'.

Furthermore, the use of the term 'relative' to refer to a single formative would give rise to confusion since this very term has been used in taxonomic grammars to refer to a *whole part of speech*.

The terms 'relative morpheme', 'relative marker' and 'relative vowel' are misleading, since these terms could just as well be used to refer to any other formatives which are peculiar to relative constructions; for example, the relative suffix -yo, where -yo could be referred to as a 'relative morpheme' or 'relative marker', and the -o in -yo, as a 'relative vowel'.

Finally, the term 'relative particle' to refer to a composite element, e.g. aba-, esi- etc. could create confusion, since this term has generally been used in typological works to refer to an invariant particle which occurs in clause-initial position. Downing, for example, cites, inter alia, the following forms as relative particles: Danish *som*, English *that* and Hausa *da*.¹⁴ Even though the initial part of the underlined element in sentence 1 is invariant in nature, it does not necessarily occur in clause-initial position as is exemplified in sentence 7 below. This term could thus be misleading if it were applied to the Zulu data.

7. *Umese [indoda ewusebenzisileyo] ngokababa*
 'Knife [man Rel Part-it-used-RS] is-the-one-of-my-father' (Rel Part = Relative Particle)
 'The knife that the man used is my father's'

There appears then to be little or no justification for many of the terms that have been used with reference to the underlined element in sentence 1, and/or its component parts. The inappropriateness of some of these terms will become clearer in the course of my analysis.

For the purposes of this thesis, I should at this stage like to propose the terms introduced below to refer to the formatives under discussion:

- (i) The initial part of the underlined element in 1, namely a-, will for the time being be referred to as a 'referential marker' (RM). This term was introduced by Hendrikse in the conclusion of his article, *A Pre-theoretical Analysis of the relative marker in Xhosa*.¹⁵ Hendrikse argues that the property *referential* governs the occurrence of the formative (1)a- in restrictive RCs in Xhosa.¹⁶ In other words, according to him, this formative is the marker of the *referentiality* of an ANT. In the course of this sub-section it will be shown that this term, i.e. *referential marker* is not entirely appropriate for the analysis of Zulu RCs, and a more fitting term will be proposed which will be related to my findings.
- (ii) The element -si- in sentence 1 will be referred to as a 'subject agreement marker' (SAM). By this term is meant the marking of class agreement with the subject of the relative predicate.
- (iii) The combination of the 'referential marker' (RM) and 'subject agreement marker' (SAM) results in, what will be called a 'composite relative prefix' (CRP). In sentence 1 then the CRP is the underlined element esi-.

In some cases the CRP consists of a vowel only, as is illustrated, for example, in the following sentence where the RM a- has merged with the SAM -i- to form the CRP e-. Note here that the SAM agrees in class with the subject of the relative predicate *indoda*. The latter is a noun of class 5 sg.

8. *Ikati* [*indoda elithengileyo*] *lifile*
 'Cat [man CRP-it-bought-RS] it-died'
 (CRP:e < RM:a + SAM:i)
 'The cat that the man bought has died'

3.3 The relationship between the CRP/RM and the demonstrative pronoun

3.3.1 Introduction

As far back as 1850, Schreuder observed that the 'relative pronoun' in Zulu is similar in form to the demonstrative pronoun (my CRP).¹⁷ Since then, a number of Zulu grammarians have echoed this observation. A few, however, have made a slightly different observation, namely that the demonstrative pronoun is related to only *the first part of the CRP, in other words the RM*.¹⁸

Whatever the exact relationship might be, the apparent similarity in form between the demonstrative pronoun and some element in the RC is not peculiar to Zulu. It has also been observed in a number of other Bantu languages, and on a broader scale, in non-Bantu languages as well. In fact, Downing notes in his typological study,¹⁹ that in almost all types of postnominal RRCs, an invariant particle is present at the beginning of the clause which is, "often, historically at least, a demonstrative form."²⁰ In some cases, this particle is found in combination with a 'relative pronoun', which, according to him, is commonly either identical to an interrogative pronoun or a demonstrative form. An example of the former is the English *who*, and of the latter, the Umbundu *una*.

Of interest are a number of comments made by Lyons on the history of the relationship that exists between the demonstrative and relative pronouns on the one hand, and between these two kinds of pronouns and the definite article on the other. He states, for example,²¹

"...in early Greek, no sharp distinction can be drawn, in terms of their forms or syntactic and semantic function, between demonstrative pronouns, the definite article and the relative pronoun: the term 'article' was at first applied to them all, and it was chosen, presumably, because they were regarded as connectives of various kinds."

Although the fact that a demonstrative-like element occurs in RCs has been widely noted both comparatively and historically, I am not aware of any systematic explanation for this phenomenon in the literature. In this subsection, the relationship that is purported to exist in Zulu between the demonstrative pronoun and the whole of the CRP on the one hand, and between the demonstrative pronoun and the RM on the other is explored in detail with the hope of arriving at some explanation for the facts observed. It is shown that the views commonly expressed in this regard in the literature on Zulu are in fact unjustified, and consequently a new perspective on the issue is developed, which, it is believed, can adequately explain problematic phenomena that emerge from the Zulu data.

3.3.2 The nature of the relationship

The CRP and the demonstrative pronoun - A common viewpoint expressed by Zulu grammarians is that the CRP has *developed from* or is *derived from* the demonstrative pronoun.

In this regard Ziervogel, for example, states,²²

"Persoonlik sien ek in die demonstratief van die indirekte omskrywing 'n relatief-pronomen wat uit die demonstratiewe begrip ontwikkel het."

Three different positions of the demonstrative pronoun are recognized in Zulu and it is from the 1st position that the CRP is generally believed to be derived. This demonstrative position is in turn commonly assumed to be formed from the juxtaposition of the element la-, sometimes called a 'demonstrative stem' in the literature,²³ and a concordial element which appears to be similar to the SAM. It is also commonly assumed that in the 'development' of the CRP in Zulu, the consonant l of the demonstrative pronoun was simply deleted. Ungerer, for example, notes:²⁴

"Die kw.bw. [kwalifikatiewe betrekingswoord - i.e. *my CRP---GP*] het nou direk uit die demonstratief ontwikkel en wel deur slegs die l van die demonstratief afstand een weg te laat..."

In this regard compare, for example, the following demonstrative pronouns (of the 1st position) and CRPs:

<u>Class</u>	<u>Dem Pro</u>	<u>CRP</u>
1 sg.	lo ²⁵	o-
pl.	laba	aba-
3 sg.	leli	eli-
pl.	la	a-
6 sg.	lolu	olu-

In contrast with the above views, certain grammarians have stated that the *demonstrative pronoun* may be formed by adding *l-* to the *CRP*. Although not explicitly stated, an implication of this viewpoint could be that the demonstrative pronoun *is derived from* the *CRP*. Consider, for example, the following quotation taken from Doke:²⁶

"To form the 1st Demonstrative, prefix *l-* to the relative concord [i.e. my *CRP*---GP]."

A similar view is expressed by Grout, who says,²⁷

"The simple form of the demonstrative, and that which relates to the nearest person or thing, is composed of the relative, and of the preformative *l...* [sic]."

The RM and the Demonstrative Pronoun - A less commonly expressed viewpoint in the literature relates to the historical development of *only the 1st part of the CRP*, i.e. *the RM* from the demonstrative pronoun, more specifically 'the demonstrative stem' *la-*. In this regard, for example, Van Eeden says:²⁸

"Dit is miskien nodig om daarop te wys - veral met die oog op 'n gevorderde en vergelykende studie van die Bantoetale - dat die relatief *-a-* waarskynlik oorspronklik 'n demonstratiewe (aanwysende) element was, heel moontlik niks anders nie as die *a* van die demonstratiewe *la...*"

To summarize then, the views commonly expressed in the literature concerning the demonstrative pronoun and the *CRP* may be represented as follows. (The symbol < is here interpreted to mean 'is historically developed or derived from').

- | | | | |
|-------|-------------------|---|--------------------------|
| 9.(i) | CRP | < | Dem Pro (1st position) |
| | e.g.: <i>aba-</i> | < | <i>laba</i> |
| (ii) | Dem Pro | < | CRP |
| | e.g.: <i>laba</i> | < | <i>aba-</i> |
| (iii) | RM: (<i>a-</i>) | < | Dem Stem: (<i>-a-</i>) |

In the paragraphs that follow, I will try to show that there is little, if any justification, for adopting any one of the viewpoints summarized above. In fact, it is shown that a different perspective is required to account for the significance of the various forms under discussion here.

Each of the viewpoints summarized in 9, involves the derivation or development of one form from another. Thus in 9(i) and 9(iii) the demonstrative pronoun and stem represent the base forms or sources from which the CRP and RM have been derived respectively. On the other hand, in 9(ii) the CRP represents the base form or source from which the demonstrative pronoun has been derived. Thus conflicting views have been expressed in the literature with regard to which of the above forms should be recognized as representing the *base form* or *source*, and no satisfactory justification has, to my mind, been offered which favours any one view above the other. A specific claim that has been made by certain grammarians, and which deserves mention here is the one that maintains that the CRP was 'introduced' into the Zulu language at a later stage than the demonstrative pronoun. In other words, according to these grammarians, the CRP represents a later innovation in the diachronic development of the Zulu language.

In this regard Ungerer, for example, says,²⁹

"Presies hoë en wanneer die kw.bw in die Ngunitale ontstaan het, sal waarskynlik nooit met sekerheid gesê kan word nie."

The above claim cannot be accepted here, since no evidence in support of it has been provided in the literature. Unless it can be clearly shown, for example, that the CRP was introduced into Zulu through the process of borrowing or unless enough evidence is provided which can explain how the function or functions associated with the CRP were morphologically realized prior to its 'introduction' into Zulu, the viewpoints and claims expressed in this regard are, in my opinion, *invalid*.

The absence of the RM a- in many Bantu languages, for example, Venda and Swahili is believed to provide supporting evidence for the claim discussed above. Ungerer, for example, says:³⁰

"Dat die kw.bw. 'n latere verskynsel is, en dus nie in Oer-Bantoe voorgekom het nie, lyk baie moontlik vanweë die feit dat dit nie in alle Bantootale voorkom nie."

Consider, in this regard, the Venda and Swahili sentences below where, as illustrated, no RM a- occurs in the RC.³¹ (The position where it would be expected to occur, by analogy to the Zulu situation, is marked by the symbol \emptyset).

Venda

10. *A thi funi mmbwa* [\emptyset *dzi lumaho*]
 'Neg Pr I like dogs [they-bite-RS]' (Neg Pr = Negative Prefix)
 'I do not like dogs that bite'

11. *U thusa vhakegulu [Øvha lwalaho]*
 'He helps old-women [they are-ill-RS]'
 'He helps the old women who are ill'

Swahili

12. *Miti [Øitakayoangushwa] itatumiwa hapa*
 'Trees [they-will-An Pro-be-felled] they-will-be-used here'³²
 'The trees which will be felled will be used here'
13. *Chakula [Øunachokula] kilipikwa na mpishi [uliyemleta] jana*
 'Food [you-are-An Pro-it-eating] it-was-cooked by cook [you-did-An Pro-him-bring] yesterday'
 'The food which you are eating was cooked by the cook whom you brought yesterday'

The invalidity of the inferences drawn from examples of the above type should become clear in the analysis which follows.

Let us begin by considering the significance of the second part of the CRP, namely the SAM. The function of this formative, as already pointed out, is to mark agreement with the subject of the relative predicate. Consider, for example, the sentences below where the subject of the relative predicate and SAM are underlined in each case. Note incidentally that in 14, the implied subject of the relative predicate, i.e. *ikati*, functions as the ANT of the RC as well.

14. *Ikati [eliphuza ubisi] lithengwe ngubaba*
 'Cat [RM-SAM-drinks milk] it-was-bought by-my-father'
 'The cat that is drinking the milk was bought by my father'

15. *Umfana [isitshudeni esimsizileyo] uzobuya kusasa*
 'Boy [student RM-SAM-him-helped-RS] he-will-return
 tomorrow'
 'The boy that the student helped will return tomorrow'
16. *Isalukazi [abafowethu abahlangane naso izolo] siyagula*
 'Old-woman [my-brothers RM-SAM-met with-her yesterday]
 she-is-ill'
 'The old woman whom my brothers met yesterday is ill'

As in the case of the CRP, *the demonstrative pronoun* also contains an element that marks class agreement with the noun to which it refers. Consider, for example, the following phrases:

17. *isitshudeni lesi*
 'this student'
- ikati leli*
 'this cat'

In fact, this phenomenon of *concordial agreement* is found in any construction or sentence in Zulu, in which a word occurs that refers in some way or other to a particular noun. In other words, *concordial agreement* is not peculiar to RCs and demonstrative pronouns. In this regard consider, for example, the following sentence where a concordial element occurs in both a possessive and a verbal form.

18. *Ikati likababa liyagula*
 'Cat of-my-father it-is-ill'
 'My father's cat is ill'

The significance of the second element of the CRP, therefore, does not pose any problem. Let us now proceed with an

investigation of the initial part, i.e. the RM. This latter form is underlined in each of the examples below. It should be noted that the vowel of this formative appears to assimilate to the vowel of the following SAM, in cases where the latter consists of a consonant and a vowel (cf. sentence 19). Where the SAM consists of a vowel only, then the RM a- merges with this vowel (cf. sentence 20).

19. *Isitshudeni* [*isela* *elisishayile*] *sithukuthele*
 'Student [thief RM(a)-SAM(*li*)-him-hit] he-is-angry'
 'The student whom the thief hit is angry'
20. *Indoda* [*efikileyo*] *yindodana kadokotela*
 'Man [RM(a)-SAM(*i*)-arrived-RS](is)-son-of-doctor'
 'The man who arrived is the son of the doctor'

As already noted, the initial part of the CRP in Zulu differs in form from the corresponding element of the demonstrative pronoun. The latter contains a consonant l as well as a vowel a, whereas the former, i.e. the RM consists of a vowel a only. Compare, for example, the following demonstrative pronouns with the CRPs of 19 and 20 above.

21. *indoda* *lena*
 'this man'

isela *leli*
 'this thief'

If one is to assume that these two forms are related, then the difference in their *morphology* needs to be explained. In a synchronic morphological analysis, the distribution of these two forms could be described as follows:

la- and a- could be considered allomorphs or variant forms, each with the following distribution: la-

occurs in demonstrative pronouns and a-, in RCs.

Furthermore two possible phonological processes could be presented as explanations for the differences in form; namely:

- (i) la- of the demonstrative pronoun undergoes a change to a- when it occurs in RCs; this process would merely involve the loss of the consonant l.
- (ii) The RM a- of the RC assumes a consonant l, when it occurs in demonstrative pronouns.

The processes involved in (i) and (ii) may be represented as follows:

- (i) $la- > a-$
- (ii) $a- > la-$

From a phonological point of view, the process represented in (i), i.e. the *deletion* or *loss* of a consonant is considered a more economical and natural process in language change, than that represented in (ii), which involves the *acquisition* of a consonant. (This latter process is commonly referred to as 'epenthesis'.) In the light of this, (i) is here considered a better alternative to (ii). A question that could now arise is: What explanation is there for the deletion of the consonant l in Zulu RCs? After all, in certain Nguni dialects such as, for example, Swati, the form la- occurs in RCs as well, e.g.

22. ...[labahambayo]
 ...[la-SAM-travel-RS] (where the implied subject is a noun of class 1 pl.).
 '...those who are travelling'

Although I believe an answer to the above question would involve a study far beyond the objectives of this thesis, I should nevertheless like to make certain pretheoretical observations, which in my opinion could throw some light on this question. I refer here to the *peculiar nature of the consonant l* in various forms and constructions in Zulu as well as certain other Bantu languages.

A few such forms and constructions are isolated below:

- (a) In the noun prefixes of classes 3 sg. and 6 sg. in Zulu, a syllable containing the consonant l, may optionally occur.³³ Compare, for example, the following noun forms:

23. *iso* or *iliso* (3 sg.) 'eye'
uju or *uluju* (6 sg.) 'honey'

- (b) A characteristic feature of one of the dialects of Zulu, spoken by the Qwabe,³⁴ is the replacement of the consonant l by the semivowel y, e.g.

24. *ukuyaya* 'to sleep' (cf. *ukulala*)
ukuyayeya 'to listen to' (cf. *ukulalela*)

- (c) The verb-to-be in certain Bantu languages, for example, Tswana, contains the consonant l. This consonant does not appear in parallel constructions in Zulu. Consider the positive copulative construction in Tswana below:

25. *Fa ole kgôsi...*
 'If you-are chief...'
 'If you are a chief...'

The non-occurrence of the copula in Zulu further illustrates a peculiarity involving the consonant z. Note the equivalent form of the above clause in Zulu.

26. *Nxa uyinkosi...*
 'If you-(are)-chief...'
 'If you are a chief...'

The exact origin of the semi-vowel y in the above example is not clear but its occurrence seems to be governed by the form of the following vowel, since a noun with initial vowel u would surface as follows in a copulative construction of the same type:

27. *Nxa uwuthisha/unguthisha...*
 'If you-(are)-teacher...'
 'If you are a teacher...'

Further research is, therefore, required for a clarification on the origin of the underlined consonants above. The fact, however, remains that the copula that contains the consonant z does not overtly occur in any of the above Zulu examples. However, an interesting observation can be made when the subject noun in this type of construction belongs to one of three classes, namely class 1 sg., pl. or 3 pl. In each of these classes, the vowel of the SAM appears to have merged with a following vowel i. It is quite possible that this latter vowel originates from the copula -zi. Assuming the correctness of this assumption, it would in effect mean that in these classes - which, incidentally are the only classes in which the SAM contains

the vowel a - the consonant l is deleted while the vowel i still manifests its influence.

Consider, for example, the following clause where the subject is a noun of class 1 sg.:

28. *Nxa uyise eyinkosi...*
 (*eyinkosi* < *a-li-y-inkosi*)
 'If his-father he-(is)-chief'
 'If his father is a chief...'

- (d) The peculiarities of the consonant l are also manifest in Xhosa in the demonstrative pronoun, where for example, it occurs in one environment only, namely when the demonstrative itself is monosyllabic, e.g.

29. le *nja* 'this dog'

In all other cases the demonstrative occurs without its initial consonant, e.g.

30. aba *bantu* 'these people'

With respect to the above examples and observations then, it may be concluded that the consonant l behaves peculiarly and the impression one gets is that it functions, phonologically speaking, as a 'weak consonant'. (This is the only lateral liquid consonant in Zulu and the reasons why it behaves in the manner it does, can only be clarified in the light of further research.)

Thus, in terms of the above discussion, the process whereby the consonant l is lost in certain constructions is a well attested one; its non-occurrence in Zulu RCs,

therefore, does not pose a problem.

Let us once again turn to the morphological and phonological description of la- and a- as set out on page 84ff. Even though these descriptions appear to be acceptable on synchronic grounds, an important issue concerning the morphemic status of la- has been taken for granted thus far. In the literature to date, la- has been assigned monomorphemic status, in other words, it has been considered a single morpheme both historically and synchronically. I should here like to investigate the possibility of it having consisted historically of two morphemes. If this were to be assumed, it would in effect mean that l- and a- would each have to be assigned a particular significance.

Let us first consider a possible significance of l-. As already noted, this consonant occurs in demonstrative pronouns in Zulu, but not in RCs. Thus a consideration of the significance/significances of the demonstrative pronoun could assist in the identification of the significance of l-.

Demonstrative pronouns are primarily *deictic* in function. In Lyons' terms, this function of the demonstrative pronoun may be characterized as follows:^{3 5}

"By deixis* is meant the location and identification of persons, objects, events, processes and activities being talked about, or referred to, in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and at least one addressee."

Lyons notes that the distinction between *this* and *that*,

and between *here* and *there*, for example, "depends upon promixity to the zero-point of the deictic context."³⁶ He interprets a form such as *this book*, as meaning the book which is near to the speaker or the book which is here, and *that book* as the book which is further away from the speaker.

Assuming his interpretation of demonstrative pronouns to be correct, there is one particular aspect or feature thereof, which is of interest and which, it is believed, could be associated with the morpheme l- under discussion. This feature relates to the 'locating' and 'identifying' properties of demonstratives. In locating or identifying an object or person, for example, one stipulates the position where that person or object is. Thus, for example, *this book* means *the book which is near to the speaker*. The specific element in this interpretation which is of particular significance here is the *verb-to-be*. The role played by the verb-to-be in the interpretation of demonstrative pronouns is of significance, since it suggests that these two forms are associated in some way.³⁷

Swahili provides interesting data in this respect. In this language, the verb-to-be appears to be expressed in two ways, namely, ni- and -li. Each of these two so-called 'copulas' have a fixed distribution. For the purposes of this analysis, it would suffice here to pay attention to aspects of the Swahili copula -ni only.³⁸ This copula occurs in constructions which are based on, inter alia, adjectives, e.g.³⁹

31. *Kikombe ni kichafu*

'Cup cop AM-dirty' (cop = copula; AM = Agreement Marker)

'The cup is dirty'

32. *Mawe ni makubwa* .
 'Stones cop AM-big'
 'The stones are big'

However, it is noted with interest that when a subject co-occurs *with a demonstrative* then the copula *ni* may be omitted from the following predicative construction. In this regard Loogman says:⁴⁰

"...omission of the copula is common when a demonstrative stands as or modifies the subject [sic]"

Consider, for example, the following sentences:

33. *Sahani hizi chafu*
 'Plates these dirty'
 'These plates are dirty'
34. *Miti ile mirefu*
 'Trees those tall'
 'Those trees are tall'

It is believed here that the non-occurrence of the copula *ni* in 33 and 34 may be related to the fact that the significance associated with the copula is contained elsewhere in the sentence. In the light of the earlier observations made with regard to the interpretation of demonstrative pronouns in English, I should like to suggest that it is these very pronouns which contain the copula significance in the above Swahili examples.

With these considerations in mind, it would not be unusual to assume that the verb-to-be could occur *overtly marked* in a demonstrative pronoun. Let us assume for the moment

that this is a possibility in Zulu. The question would then arise: Which element in the pronoun would be associated with such a significance? Take, for example, the form, *leliya*, the demonstrative pronoun of class 3 sg. of the 3rd position, meaning *the one over there* when indicating a person or object that is far away from the speaker. As already noted, the element -li- in the demonstrative pronoun is an agreement marker. There is reason to believe that -ya is the deictic marker in this form, since its occurrence/non-occurrence appears to distinguish between degrees of proximity. Compare, for example, the following forms:

leli∅ 'this one' *leliya* 'that one over there'

If the final element is assumed to be a marker of 'degree of proximity', then the vowel o of the 2nd position, e.g. *lelo* would also be assigned such a significance. In terms of these observations then, it may be stated here that the indicators of deixis in the Zulu demonstrative pronoun are: ∅, -o and -ya. Given the assumption that the demonstrative pronoun contains an element that is associated with the verb-to-be and having isolated the agreement and deictic markers of such a pronoun, there remains only one element that could possibly be associated with the verb-to-be- and that is la-.

Now, interestingly enough, one of the copula elements that has been reconstructed in Proto-Bantu has the form **dì*.⁴¹ Various reflexes of this form are manifest in a number of Bantu languages, inter alia, -li in Swahili and -le in Tswana, e.g.:⁴²

Swahili

35. *Sisi [tulio wageni] ...*
 'We [SAM-cop-An Pro strangers] ...'
 'We who are strangers'

Tswana

36. *Fa ele Thêbê...*
 'If it-is Thebe...'
 'If it is Thebe...'

In terms of both the above observations and also the earlier assumptions made concerning the occurrence of the verb-to-be in the interpretation of demonstrative pronouns, I should here like to propose that the initial consonant l of the Zulu demonstrative pronoun is in fact derived from the copula element li.

I should now like to consider a particular construction in Zulu which is similar to the demonstrative pronoun in certain respects, and which I believe provides supporting evidence for the assumption made concerning the significance of l-. This construction has commonly been called the *locative demonstrative copulative*. As with the demonstrative pronoun, three positional forms of locative demonstrative copulatives are distinguished, translating roughly the English: here is/are (1st position); there is/are (2nd position); there is/are over there in the distance (3rd position). A few examples are given below. Alternative forms occur within parentheses.^{4 3}

	1st pos.	2nd pos.	3rd pos.
Cl. 1 sg.	<i>nangu</i>	<i>nango</i>	<i>nanguya</i>
pl.	<i>nampa</i> (<i>naba</i>)	<i>nampo</i> (<i>nabo</i>)	<i>nampaya</i> (<i>nabaya</i>)
3 sg.	<i>nanti</i> (<i>nali</i>)	<i>nanto</i> (<i>nalo</i>)	<i>nantiya</i> (<i>naliya</i>)
pl.	<i>nanka</i> (<i>nawa</i>)	<i>nanko</i> (<i>nawo</i>)	<i>nankaya</i> (<i>nawaya</i>)
4 sg.	<i>nasi</i>	<i>naso</i>	<i>nasiya</i>
pl.	<i>nazi</i>	<i>nazo</i>	<i>naziya</i>

Unlike the case of the demonstrative pronoun, the *verb-to-be* is here expressed in each form of the locative demonstrative copulative. Consider, for example, the following phrases:

37. *Nampo/nabo abantwana*
 'There-are children'
 'There are the children'
- Nanti/nali ikati*
 'Here-is cat'
 'Here is the cat'
- Naziya izimoto*
 'There-are-(over there) motorcars'
 'There are the motorcars'

Since the locative demonstrative copulative semantically incorporates the verb-to-be, it would be expected that *some element* in this form/construction *is* or *is related to* a copula. In order to identify such an element, let us take one example, namely the cl. 4 sg. form *nasiya*.

If my assumption concerning the significance of *-ya* in the demonstrative pronoun is correct, then this formative would have the same significance of marking deixis in the locative demonstrative copulative. The element *-si-* indicates agreement with the class of the noun that is referred to.

Now let us consider the first syllable *na-*. It is proposed here that the consonant of this syllable namely *n* is in fact related to another copula element which has been reconstructed for Bantu languages namely, **ni*. The reason why *this copula* should occur in the locative demonstrative copulatives, and not **li*, could be related to the fact that **ni* is associated with certain features that are not attributable to **li*. An investigation of the feature(s) that distinguish the two would, however, involve research that would exceed the scope of this thesis.

Now let us consider one particular use of the locative demonstrative copulative, which as far as I know, has not yet been isolated in Zulu grammars to date. I refer to the possible use of this form as an ordinary demonstrative pronoun. Consider, for example, the following sentence:

39. *Ngizohamba nganansi imoto*
 'I-will-travel by-means-of-here-is car'
 'I will travel with this car'

In this sentence the copulative connotation generally associated with the locative demonstrative copulative is completely lost and the form in 39 functions in exactly the same way as a demonstrative pronoun. In fact, there does not appear to be any clear-cut distinction in meaning between 39 and sentence 40 below:

40. *Ngizohamba ngalemoto*

'I-will-travel by-means-of-this-car'

'I will travel with this car'

Sentence 39 is of particular significance since it illustrates the fact that a form which contains a copular element may be used in a particular environment where the significance associated with the copula is completely lost. This appears to be the way in which the demonstrative pronoun is *always* used.

I shall henceforth assume then, that the l- of the demonstrative pronoun is in fact the l- of the copula li. Now that the significance of l has been isolated, only one element or formative remains whose significance needs clarification, namely the RM a-.

3.4 The significance of the formative a-

3.4.1 Introduction

In this sub-section an investigation is undertaken of the significances of the so-called RM a-. It is shown that this formative performs basically two functions, and as a result of the findings of this investigation, the term *referential marker* is found to be inappropriate, and a more suitable term is suggested. The investigation deals primarily with the function of a- in demonstrative pronouns and RCs. However, it is shown that this formative occurs in certain other constructions as well, namely the adjective and possessive.⁴⁴ In fact the assumption is made that *it is this very formative* which relates all of the abovementioned constructions by virtue of its significances.

With regard to its occurrence in RCs, the present investigation is restricted to the so-called subject RCs only, i.e. RCs in which the ANT functions as the implied subject of the relative predicate. The reason for narrowing down the analysis to this type of clause, will become clearer in subsequent sections where it will be shown, for example, that certain generalizations made here are *not applicable* to the more complex RCs. As will be pointed out, however, the irregularity that arises in this regard can be understood and explained *only if* certain perceptual phenomena are taken into consideration.

3.4.2 Semantic and syntactic considerations

Before an attempt is made to isolate the semantic and syntactic significances inherent in a-, an investigation needs to be undertaken of certain aspects relating to the significances of demonstrative pronouns and RCs. It is believed that such an investigation could throw light on the significance(s) of the element a-, since this element is common to both these forms/constructions.

The deictic function of the demonstrative pronoun has been well addressed in the literature. Reference to it was also made in the preceding sub-section. It would suffice here to reflect on yet one more interesting characterization of this function, namely the one presented by Hawkins:^{4 5}

"Very briefly, the speaker can be said to be 'doing' the following things, or performing the following acts of reference when uttering a demonstrative (we ignore the actual distinction between *this/these* and *that/those* in this context). He (a) introduces a referent (or referents) to the hearer; and (b) instructs

the hearer to match this linguistic referent with some identifiable object, where identifiability means either (i) visible in the situation or (ii) known on the basis of previous mention in discourse."

An important point that needs to be made here is that the notion of *deixis* is not involved in RCs. In this respect consider, for example, the statement below made by Cole in his analysis of the Tswana relative construction, where he refers to the apparent 'lack of demonstrative force' in this construction.^{4 6}

"Although the initial element of the relative concord shows identity of form with the first demonstrative, it must be emphasized that *in this type of construction it has completely lost its demonstrative force...*" [Italics---GP]

Thus in terms of the above observation, it may be stated that deixis cannot be the common property that semantically links demonstrative pronouns and RCs. An implication of this viewpoint would be that the formative a- is not associated with the significance of deixis. The question may now be asked: If deixis is not common to both these constructions, then what semantic notion or concept relates the two?

I believe that certain comments made by Lyons may provide an answer to this question. In his discussion of English demonstrative pronouns, Lyons observed that these pronouns share a common semantic property with the definite article and third-person pronouns. He states,^{4 7}

"First of all, it should be noted that there is a component of definiteness in the meaning of all three classes of lexemes: 'this' means, roughly, "the one here"; 'that' means "the

one there"; 'he' means "the male one"; and so on. As we shall see, definiteness is combined with the distinction of proximity *vs* non-proximity in the case of the demonstratives; and with distinctions of gender, or sex, in the case of the third-person pronouns. The second point to note is that, generally speaking, in English 'this' is marked* and 'that' is unmarked*...: there are many syntactic positions in which 'that' occurs in English and is neutral with respect to proximity or any other distinctions based on deixis."

Elsewhere, Lyons says,⁴⁸

"The function of the demonstrative pronoun is to draw the attention of the addressee to a referent which satisfies the description implied by the use of the pronoun in terms of gender, number, status, etc.

Broadly speaking, there are two ways in which we can identify an object by means of a referring expression: first, by informing the addressee where it is (i.e. by locating it for him); second, by telling him what it is like, what properties it has or what class of objects it belongs to (i.e. by describing it for him). Either or both kinds of information may be encoded in the demonstrative and personal pronouns of particular language-systems. For example, the English demonstrative pronoun 'this', when it is used as a referring expression, locates the referent in relation to the speaker; the pronoun 'he', on the other hand, gives the addressee some qualitative information about the referent, but says nothing about its location. The meaning of demonstrative and third-person pronouns is comparable, in this respect, with the meaning of definite noun phrases in English: 'this' is roughly equivalent to 'the one near me', and 'he' to 'the male one'. Clearly, the more information, whether locative or qualitative, that is encoded in a deictic expression the easier it is for the addressee to identify its referent."

Thus it may be said that the demonstrative, by virtue of its deictic qualities, is always *definite* in nature. On the notion *definiteness*, Hendrikse and Poulos state,⁴⁹

"In terms of the property +DEF the questioner or speaker presupposes that the hearer shares the same knowledge about a *specific* referent(s) of an NP." [Italics---GP]

Thus the demonstrative pronoun being definite in nature, would always serve to specify a referent, in other words, it singles out from a whole set of referents a particular one or subset of referents. In this respect consider the following examples:

- 41.1 *isitshudeni lesi* 'this student' (i.e. one *particular* student)
 41.2 *izitshudeni lezi* 'these students' (i.e. this *group* or *subset* of students)

Let us now turn to RCs and consider first the following sentence:

- 42.1 *Umfana [ofunda isiZulu] ngumngane wami*
 'Boy [CRP-studies Zulu] (is)-friend of-me'
 'The boy who is studying Zulu is a friend of mine'

Recall now Keenan and Comrie's definition for RRCs, given on page 52, and repeated here for ease of reference:⁵⁰

"We consider any syntactic object to be an RC if it specifies a set of objects (perhaps a one-member set) in two steps: a larger set is specified, called the *domain* of relativization, and then restricted to some subset of which a certain sentence, the restricting sentence is true."

In the above sentence, the *set* of referents which represents the domain of relativization is *abafana*. This set is restricted to only one individual, *umfana*, of whom the restricting sentence *ofunda isizulu* is true.

Thus demonstrative pronouns and RCs appear to have at least one property in common, namely that of *specifying* a referent (or subset of referents).

For a referent to be specified implies, in effect, that that referent must be presupposed to exist in some universe of discourse. It may be said then that the occurrence of a demonstrative pronoun or RC *presupposes the existence or referentiality* of some 'object' or 'thing'.

On the notion, 'referentiality', Givon says,⁵¹

"...referentiality is a semantic property of nominals. It involves, roughly, the speaker's intent to 'refer to' or 'mean' a nominal expression to have non-empty references -i.e. to 'exist' - within a particular universe of discourse. Conversely, if a nominal is 'non-referential' or 'generic', the speaker does not have a commitment to its existence within the relevant universe of discourse. Rather, in the latter case the speaker is engaged in discussing the genus or its properties but does not commit him/herself to the existence of any specific individual member of that genus."

The feature [REFERENTIAL] is sometimes used in formal theorizing to represent presupposition of existence. In this regard Hendrikse says,⁵²

"Hence, if an NP is marked [+REFERENTIAL], then the speaker presupposes the existence of the object to which the NP refers. If, on the other hand, an NP is marked [-REFERENTIAL],

the speaker has no presupposition that the object to which the NP refers, exists."

With Givon's and Hendrikse's views in mind, consider now the following sentences, paying particular attention to the referential status of the noun *umuntu*.

43. *Ngithanda umuntu [omemezayo]*
 'I-like a-person [CRP-shouts]'
 'I like a person who shouts'
44. *Angithandi muntu [omemezayo]*
 'Neg Pr-I-like person [CRP-shouts]'
 'I don't like any/a person who shouts'

In sentence 43, the existence of the referent of the NP *umuntu* is presupposed. In other words, the NP *umuntu* has the property [+REFERENTIAL]. Thus the occurrence of an RC, in this case *omemezayo*, to specify this referent, presents no problem. In sentence 44, on the other hand, the existence of the referent of the NP *muntu* is not presupposed. In other words, *muntu* does not refer to any specific individual in the universe. Yet an RC which serves to *specify a referent* and which, by virtue of this characteristic presupposes the existence of a referent, *is allowed to co-occur with it (i.e. muntu)*.

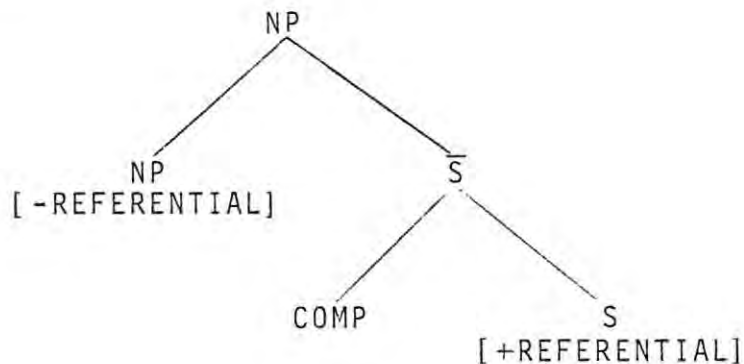
I believe that there are two possible ways of accounting for this discrepancy, one involving formal considerations and the other non-formal, pragmatic considerations.

1. Hendrikse has noted that the feature [REFERENTIAL] can be extended to NPs dominating the non-lexical category S, thus representing the "ontological conditions of propositions, *viz.*, occurrence, obtainment, etc."⁵³ This feature, he says,⁵⁴

"...is introduced into the theory to cover the ontological conditions associated with NP's no matter what items appear immediately below the NP, *viz.*, the lexical category N or the non-lexical category S."

In applying these viewpoints to RCs, and given the correctness of the assumption that RCs have underlying sentential representations, i.e. that they are dominated by the non-lexical category S, one may consider RCs to be referential in their own right. Their underlying representation would then roughly have the following configuration.

Diagram 1



The view may now be adopted that the property of the initial constituent, i.e. [-REFERENTIAL] overrules that of [+REFERENTIAL]; thus any rule which is sensitive to the former would at the same time be sensitive to the whole complex NP which contains it (on the same line as Chomsky's A over A principle for movement rules). This would imply that the topmost NP in

diagram 1 assumes the property [-REFERENTIAL] if the head constituent has this property.

2. Givon, in his discussion of the pragmatics of negative sentences, makes an interesting observation which could throw light on the problem at hand. He says:⁵⁵

"Negative assertions are used in language in contexts where the corresponding affirmative has been mentioned, deemed likely, or where the speaker assumes that the hearer — erroneously — holds to a belief in the truth of that affirmative."

Let us for the moment consider the corresponding affirmative form of sentence 44, hence:

45. *Ngithanda umuntu [omemezayo]*
 'I-like person [CRP-shouts-RS]'
 'I like a person who shouts'

In this sentence, the speaker is indicating that out of a set of people *abantu*, there is a subset *umuntu* of which it may be said that the restricting sentence *omemezayo* is true. The corresponding negative assertion expressed in 44 may then merely be viewed as meaning that no such subset exists of whom it may be said that the restricting sentence is true. Thus the fact that a non-referential entity is followed by one which presupposes its existence, should not be viewed as a situation where a contradiction of notions obtains, but rather as a situation where the information conveyed presupposes a corresponding affirmative assertion.

With the above arguments in mind, consider now the following *ungrammatical* sentence, in which a non-referential nominal is followed by a demonstrative pronoun.

46. **Angithandi muntu lowo*
 'I don't-like person that'

The ungrammaticality of this sentence poses a problem. As illustrated here, the co-occurrence of a non-referential noun and a demonstrative pronoun is apparently *not allowed*. But, as was noted in 45, a non-referential noun may co-occur with an RC. This observation implies, in effect, that demonstrative pronouns do not 'behave' in the same manner as RCs with respect to the 'referential' status of the NPs that they refer to. The question that arises here is: Why can a demonstrative pronoun *not* co-occur with a non-referential noun?, or for that matter: What property distinguishes demonstrative pronouns from RCs in sentences like 45 and 46.

I believe the property involved here is that of *definiteness*. I have already indicated that a demonstrative pronoun, by virtue of its deictic significance is *always definite* in nature. In other words, whenever it is used, the ANT it refers to is known to both speaker and hearer. In this regard, consider sentence 47 below.

47. *Isalukazi lesi sikhuluma isiFulentshi*
 'Old-woman this she-speaks French'
 'This old woman speaks French'

Here, knowledge of the referent *old woman* is shared by both speaker and hearer. Now consider a situation where the noun *isalukazi* is introduced into a discourse for the first time. In other words, knowledge of its referent is not shared by both speaker and hearer (i.e. it is *indefinite*). In such a case a demonstrative pronoun *may not co-occur with it*. Consider 48 below:

48. **Kukhona isalukazi lesi ngaphakathi...*
 'There-(is)-present old-woman this inside...'

Examples 47 and 48 above should now be compared with 49.1 and 49.2, where it is shown that an RC, unlike a demonstrative pronoun, may co-occur with ANTs that are both *definite* and *indefinite*. In 49.1 the NP *umfana* is *definite*, while the NP *indoda* in 49.2 is *indefinite*.

- 49.1 *Ngiyamazi umfana [ogulayo]*
 'I-him-know boy [CRP-ill-RS] '
 'I know the boy who is ill'
- 49.2 *Kufike indoda [ekwaziyo]*
 'There-arrived man [CRP-you-know-RS] '
 'A man who knows you arrived'

Thus an RC may be used to specify a referent even if knowledge of that referent is not known to the hearer. The demonstrative pronoun, on the other hand, can only be used if the referent of the ANT is known to both speaker and hearer (or if the speaker assumes that the hearer has knowledge of the referent.)

To summarize the observations made thus far, then: both demonstrative pronouns and RCs serve to *specify* referents. However, the demonstrative can only be used when the ANT is *definite*. The RC, on the other hand, may be used with either a *definite* or *indefinite* ANT.

Now let us turn to what I believe is an additional significance of both demonstrative pronouns and RCs. Consider the following short discourse:

50. *Isitshudeni [esifunda ¹ isizulu] ngumngane kaJohn, kodwa [esifunda ² isiSuthu] ngumngane kaThemba. [Esi-funda ³ isizulu] sizophumelela...*
 'Student [CRP-studies-Zulu] is-friend of-John, but [CRP-studies Sotho] is-friend of-Themba. [CRP-studies Zulu] he-will-pass...'
 'The student who studies Zulu is a friend of John, whereas (the student) who studies Sotho is a friend of Themba's. The one studying Zulu will pass...'

An interesting situation arises in this discourse. RCs ¹ and ² serve to specify the referents they refer to; the RC ¹ specifies which student is a friend of John's, while ² specifies which student is a friend of Themba's. The RC that is of interest here is the one represented by ³. This RC surely performs a different function to that of ¹, since the referent of the ANT has already been specified and there appears to be no logical reason why it should be *specified* in exactly the same way again. In fact the function of ³ appears to be merely that of referring back to an already *specified* referent. It is being used in this discourse for purposes of contrast, i.e. it is contrasting the student who is studying Zulu with the one who is studying Sotho. This function of an RC appears to be *identical* to that performed by pronouns, as is manifest for example in the following discourse:

51. *Abafana bafunda isizulu kodwa amantombazana afunda isiSuthu. Bona bazophumelela kodwa wona...*
 'Boys they-study Zulu, but girls they-study Sotho. They (boys) they-will-pass but they (girls)...'
 'The boys study Zulu, whereas the girls study Sotho. They (the boys, that is) will pass but (as for the girls) they...'

In this discourse the so-called absolute pronouns, *bona* and *wona* are used to refer back to already mentioned referents. At the same time, they perform the additional function of contrasting these referents. In the light of these observations, it may be concluded that the function of specificity does not play any role in the occurrence of the RC [3] in 50. *Instead this RC functions purely as a pronoun.* This situation may be compared with that which exists in English where the pronominal function of the RC noted above is indicated by the occurrence of 'the one' before the RC. Consider in this regard, for example, the free English translation of 50 above. Note that the words *the one* are obligatorily used before the RC represented in [3]. Unlike the situation in English, *there is no morphological difference* between the RC that functions as a specifier in Zulu and that which functions as a pronoun.

With respect to demonstrative pronouns, their pronominal function has been well addressed in the literature. In this regard, consider, for example, the following quotation taken from Lyons:^{5 6}

"Although the demonstratives 'this' and 'that' are traditionally regarded as adjectival modifiers of a head noun in such phrases as 'this boy' and 'that boy', one might equally well think of them, from a semantic point of view, as pronouns combined with an appositional noun or nominal."

Thus RCs as well as demonstrative pronouns appear to perform at least two basic functions, namely:

- (i) To specify a referent, in which case they may be referred to as *specifiers*,

- (ii) To refer back to an already specified referent. In such a case they function as *pronouns*. (It should be noted that the function expressed here is dependent on that expressed in (i)).

I maintain that these two functions are inherent properties of the morpheme a-, which, as already noted, is common to both demonstrative pronouns and RCs. Given the correctness of this assumption, it may be predicted then, that wherever this morpheme occurs, the above functions will be associated with it. Supporting evidence for this prediction may be provided by two 'categories' or 'parts of speech' that have been traditionally called *Adjectives* and *Possessives*. Consider the following discourse situations, where adjectives occur in 52 and possessives in 53. The position of the formative a- is underlined wherever it occurs.

52. Kwafika indoda ^[1] ende nemfushane. Ende yayikufuna...^[3]
 'There-arrived man tall and-short. Tall-one he-you-wanted...'
 'A tall as well as a short man arrived. The tall man was looking for you...'
53. Inja yomfana ^[1] ingaphandle, kodwa eyakho iphi?^[2]
 'Dog of-boy it-(is)-outside, but yours it-(is)-where?'
 'The boy's dog is outside but where is yours?'

As was the case with RCs, the adjectives [1] and [2] in 52 perform the function of *specifying* a particular referent, in this instance, *indoda*. The adjective [3], on the other hand functions as a *pronoun*, referring back to an already mentioned and specified referent. The possessive construction in 53 presents a rather interesting picture, since there is

a morphological difference between a possessive which functions as a specifier and that which functions as a pronoun. In 53 the former function is expressed by [1] and the latter by [2]. Interestingly, the formative a- occurs in [2] only, i.e. when the 'possessive' functions as a pronoun;⁵⁷ its occurrence here presupposes the specification of an already mentioned referent. Thus in this 'part of speech', the initial formative a- appears to have a pronominal function only.

To summarize then: the formative a- functions as a *specifier* and *pronominal* marker in demonstrative pronouns, RCs and adjectives. In possessives, on the other hand, only its function as a *pronominal marker* is apparent. In the light of the above findings, the terms 'specifier marker' or 'pronominal marker', to refer to the formative a-, would appear to be more suitable than that of 'referential marker', at least as far as Zulu RCs are concerned. Since its primary function in RCs appears to be that of specifying a referent, I shall henceforth in this study refer to this formative as a *specifier marker* (SpecM).

3.4.3 Additional considerations of the specifier marker a-

In this section, an examination is conducted of two Nominal RC forming strategies in Zulu, which are distinguished in terms of the location of the specifier marker a-. These strategies are further explored in terms of the Accessibility Hierarchy (AH) set out by Keenan and Comrie. Their findings on this hierarchy are then reexamined in the light of the Zulu data.

3.4.3.1 a- Affixing strategies

Let us begin this investigation by considering some of the sentences set out in the summary of Doke's analysis in 1.4.4.3ff. The headings used by Doke to refer to the various relationships that exist between the ANT and the relative predicate, are retained here for the time being. The position where the specifier marker a- occurs is underlined in each case.

Subjectival relationship (plain)

54. *Indoda [ehleka kakhulu] inguthisha*
 'Man [SpecM-SAM-laughs much] he-(is)-teacher'
 'The man who laughs a lot is a teacher'

Subjectival relationship (possessive)

55. *Inkosi [emntwana wayo uyagula] ihambile*
 'Chief [SpecM-(SAM ?)-child of-him he-is-ill] he-left'
 'The chief whose child is ill has left'

Objectival relationship (possessive)

56. *Umntwana [esipheke ukudla kwakhe] uhambile*
 'Child [SpecM-SAM-cooked food of-him] he-left'
 'The child whose food we cooked has left'

Locative relationship (plain)

57. *Indlu [abafana abahlala kuyo] ikude*
 'Hut [boys SpecM-SAM-live in-it] it-(is)-far'
 'The hut in which the boys live is far'

Comparative relationship (plain)

58. *Naso isitshudeni [umfowethu ahleka njengaso]*
 'There-is student [my brother SpecM-SAM-laughs like
 him] '
 'There is the student like whom my brother laughs'

An interesting observation that may be made with respect to the above sentences, is that in all instances, with the exception of sentence 55, the specifier marker a- is affixed to the relative predicate. The relative predicate may be in clause-initial or non-clause-initial position. (In this respect compare, for example, sentences 54 and 57.) In sentence 55 on the other hand, the specifier marker a- is affixed to a noun which occurs in clause-initial position. The question that arises here is:

59. Why should the RC of the so-called 'subjectival possessive relationship' differ from all other types of relationship with regard to the position of the specifier marker a-?

Let us for the moment recall certain views expressed by Keenan and Comrie concerning the surface forms of RCs. They refer to the distinct ways of forming RCs as different *RC-forming strategies*. In this regard, they state,⁵⁹

"There are many ways RCs differ at the surface, and hence many possible criteria for determining when two strategies are different."

For the purposes of this study, I assume that one possible criterion for determining different strategies in Zulu RC formation, concerns the position of the specifier marker a- in the surface. Thus I consider two RCs to be formed by different strategies if the position where the specifier marker a- is affixed, differs. For the sake of convenience, I shall refer to the strategy which involves the affixing of a- onto the relative predicate, as *Strategy 1*, and the other, which involves the affixing of a- onto the clause-initial noun, as *Strategy 2*.

The identification of distinct RC-forming strategies in various languages has led Keenan and Comrie to propose an Accessibility Hierarchy (AH).⁶⁰ This hierarchy which specifies the set of possible grammatical relations to which RC formation may be sensitive, is set out as follows:

SU > DO > IO > OBL > GEN > OCOMP

If one takes the various positions on the AH to refer to the implied function of the ANT in the RC,⁵⁸ the question posed in 59 may be rephrased as follows:

60. Why is a different strategy used for the GEN position?

I believe that a possible explanation for the problem identified here, may be provided if one considers the three hierarchy constraints (HCs) set out by Keenan and Comrie, which are based on the AH. These are as follows:

1. A language must be able to relativize subjects
2. Any RC-forming strategy must apply to a continuous segment of the AH
3. Strategies that apply at one point of the AH may in principle cease to apply at any lower point.

Given that these HCs do make correct predictions about RC formation, Keenan and Comrie offer the following explanation as to why this should in fact be so:⁶¹

"The AH directly reflects the psychological ease of comprehension."

According to them, the lower a position is on the AH, the more difficult it is to understand RCs formed on that position.

The above views could assist in providing an explanation for the question posed in 60, if the assumption is made here that the GEN position occupies the lowest position on the hierarchy. Only if this were assumed, would the hierarchy constraints 2 and 3 be satisfied. This would in effect mean that an RC formed on the GEN position is more difficult to understand than one formed on the OCOMP position, at least as far as Zulu RCs are concerned. This could indeed be the case, since as exemplified in sentence 58 the strategy employed for the OCOMP position is the same as that which is used for all the other positions, with the exception of GEN. Thus if OCOMP were assumed to occupy a position higher than GEN (possibly the same as that of OBL) then the GEN position could, in fact, be conceived of as a cut-off point on the AH. With respect to 'cut-off' points on the hierarchy, Keenan and Comrie

state,⁶²

"This means that in designing the grammar for a possible human language, once we have given it a strategy that applies at some point on the AH, we are free to terminate its application at any lower point."

Elsewhere, they say,⁶³

"First, it would be natural that a way of relativizing a certain position might not be applicable at the next lower position (HC₃) on the general assumption that syntactic processes are ways of encoding meanings; and, if one meaning is inherently more difficult to encode than another, then a strategy for encoding the first need not apply to the second. By the same token, a strategy that applies to one position but fails to apply to the next lower position would not be expected to apply to a still lower position (HC₂). For, if a given strategy is used to encode a fairly easy meaning and that strategy is "strong" enough to encode a rather difficult meaning, then it is surely strong enough to encode the meanings of intermediate difficulty."

The discussion above thus appears to offer a possible explanation for the problem raised in 60. However, further research that has been conducted for this study has revealed that the problem at hand is more complex than appears to be the case. Firstly, I wish to point out that *Strategy 1* may also be used in the formation of RCs on the *GEN* position. The resultant sentence though acceptable is, however, considered deviant. Consider in this regard sentence 62 below:

62. ?*Inkosi [umntwana wayo ogulayo] ihambile*

'Chief [child of-him SpecM-SAM-is-ill] he-left'

'The chief whose child is ill has left'

Now compare sentence 62 with sentence 55 (here repeated as 63), where strategy 2 is employed.

63. *Inkosi [emntwana wayo uyagula] ihambile*
 'Chief [CRP-(SAM?)-child of-him he-is ill] he-left'
 'The chief whose child is ill has left'

The above observation is of significance and the question may now be asked:

64. Why are *two strategies* employed for the GEN position?

If one takes a closer look at sentence 62, it will be noted that the only morphological element in the RC that refers to the ANT, is the anaphoric pronoun *-yo* in *wayo*. In 63, on the other hand, two elements occur which refer to the ANT, namely the anaphoric pronoun *-yo*, and an agreement marker which appears to be affixed to the initial noun of the RC. This agreement marker appears to be identical in form to the SAM; hence *emntwana* is derived from SpecM(a) + SAM(i) + Noun, where the SAM(i) agrees in class with the ANT *inkosi*. I believe that the occurrence of an agreement marker before the initial noun of the RC, serves to provide a stronger 'morphological link' between the RC and the ANT. Its occurrence in this position assists the listener to 'identify' or 'recover' the ANT. In view of this, I believe that a sentence such as 63 is easier for a listener to decode,⁶⁴ than is the case with sentence 62. Thus the prediction may be made here, that when Strategy 2 is employed, the '*decodability*' of the message conveyed will present no problem to the listener, whereas when Strategy 1 is employed decoding difficulties will arise. Evidence for this is provided in situations where the ANT

has been mentioned in prior discourse and where its occurrence immediately before the RC would therefore not be required. In this regard consider, for example, sentences 65 and 66 below, which correspond with 62 and 63.

65. *[Umntwana wayo ogulayo] ihambile

66. [Emntwana wayo uyagula] ihambile

'[CRP-SAM-child of-him he-is-ill] he-left'

'(The one) whose child is ill has left'

Note that in 65, the 'recoverability' of the ANT is not possible, hence an unacceptable sentence results. In sentence 66, on the other hand, the 'decoding' of the message conveyed presents no problem, by virtue of the fact that an agreement marker occurs in clause-initial position which serves to 'recover' the implied ANT.

In the light of the above observations, the recognition of a 'cut-off' point at the GEN position on the AH would still be acceptable, if one assumes that certain decoding problems associated with Strategy 1 at this lowest position on the hierarchy *have given rise to the employment of another strategy*. In other words, the view is expressed here that Strategy 2 has in fact *evolved* as a result of certain decoding problems associated with Strategy 1 at the GEN position.⁶⁵

Research carried out for this study has, however, revealed that Strategy 2 *is not peculiar to the GEN position*. *It may be employed for other positions as well*. This observation has to my mind, not been recorded in any Zulu grammar works to date. Consider, for example, sentences 6 to 69 below. (The headings used by Doke for the different relationships that are exemplified here, are indicated

within parentheses).

DO (Plain objectival relationship)

67. *Indoda [ebaba uyayithanda] iyinkosi*
 'Man [SpecM-SAM-my-father he-him-likes] he-(is)-
 chief'
 'The man whom my father likes is a chief'

IO (Plain objectival relationship)

68. *Insizwa [enesi uyinike izincwadi] iyagula*
 'Young man [SpecM-SAM-nurse she-him-gave letter] he-
 is-ill'
 'The young man to whom the nurse gave the letter is
 ill'

OBL (Plain conjunctive)

69. *Umfana [ositshudeni sikhuluma naye] uyagula*
 'Boy [SpecM-SAM-student he-talks with him] he-is-ill'
 'The boy with whom the student is talking is ill'

As illustrated above and as already pointed out, the specifier marker *a-* is affixed to the initial noun of the RC when Strategy 2 is employed. In this regard, compare the following grammatical and ungrammatical sentences.

- 70.1 *Indoda [ebaba ukhuluma nayo] iyinkosi*
 'Man [SpecM-SAM-my-father he-talks with-him] he-
 (is)-chief'
 'The man with whom my father is talking is a chief'

- 70.2 **Indoda [ekhuluma ubaba nayo] iyinkosi* (where the clause-initial word is a predicate)
- 70.3 **Indoda [emina ngikhuluma nayo] iyinkosi* (where the clause-initial word is an absolute pronoun)
- 70.4 **Indoda [emkhulu ukhuluma nayo] iyinkosi* (where the clause-initial word is an adjective (a noun of cl. 1 sg. being implied here))

Turning now to sentences 67 to 69 it is noted with interest that the differences which exist between the RCs of these sentences and the corresponding RCs that are formed by Strategy 1, may be explained in terms of the same *perceptual considerations* that were discussed for the GEN position. Consider, for example, sentence 67 here repeated as 71.

71. *Indoda [ebaba uyayithanda] iyinkosi*
 'Man [SpecM-SAM my-father he-him-likes] he-(is)-chief'
 'The man whom my father likes is a chief'

Now consider the employment of Strategy 2 in the formation of the RC in the above sentence.

72. *Indoda [ubaba ayithandayo] iyinkosi*
 'Man [my-father SpecM-SAM-him-likes-RS] he-(is)-chief'
 'The man whom my father likes is a chief'

In a context where the ANT has been previously mentioned, the following sentences would result. 73 and 74 correspond with 71 and 72.

73. [*Ebaba uyayithanda*] *iyinkosi*,
 '[SpecM-SAM-my-father he-him-likes] he-(is)-chief'
 '(The one) whom my father likes is a chief'
74. ?[*Ubaba ayithandayo*] *iyinkosi*
 '[My-father SpecM-SAM-him-like-RS] he-(is)-chief'
 '(The one) whom my father likes is a chief'

Interestingly, sentence 73 does not present any decoding problems as expected, while 74, though acceptable, appears to be difficult to decode. These considerations confirm the earlier views expressed with regard to the GEN position, namely that when Strategy 1 is employed certain decoding problems arise. A question that may be asked here is: Why should sentence 74 (where the D0 position is involved) be acceptable, while sentence 65 (which involves the GEN position) is unacceptable. Sentence 65 is here repeated as 75.

75. * [*Umntwana wayo ogulayo*] *ihambile*

I believe a possible explanation for this problem could relate to the fact that the GEN position (which is involved in sentence 75) is at a lower level on the hierarchy than the D0 position (involved in 74), and thus more difficult to decode.

Let us now consider RCs that are formed on the SU position. Consider first the following sentence:

76. *Udokotela* [*osize isiguli*] *uyakufuna*
 'Doctor [SpecM-SAM-helped patient] he-you-wants'
 'The doctor who helped the patient wants you'

In this sentence, the ANT *udokotela* functions as the implied subject of the relative predicate *osize*, and occurs in a position immediately preceding the predicate. The

affixing of a- onto the relative predicate implies in effect that Strategy 1 has been employed, and not Strategy 2 - this, in terms of the observations made earlier that when Strategy 1 is used, a- is affixed to the relative predicate, and when Strategy 2 is used, a- is affixed to the clause-initial noun.

The observation that it is Strategy 1 and not Strategy 2 that is employed, raises a problem, since this would in effect imply that, as far as Strategy 2 is concerned, a 'gap' exists on the AH at the highest position, i.e. the position which is purported to be the most accessible of all. This would not conform to the HCs set out on page 114.

I believe there are two possible explanations for the problem at hand. One involves a reinterpretation of the effect of Strategy 2, and the other a reinterpretation of my analysis of the two strategies. These two explanations are dealt with separately below:

1. A reinterpretation of the effect of Strategy 2

Note that the RC in sentence 76 bears a striking resemblance to RCs that have been formed by Strategy 2 on other positions. I refer here specifically to the observation that the specifier marker in this sentence is affixed to an agreement marker *which refers to the ANT*. Furthermore, this affixing takes place in clause-initial position. The reason why the initial word in 76 is not a noun, is directly related to the fact that the ANT, whose position is outside the RC, functions as the implied subject of the relative predicate. Its function cannot be duplicated by another noun within the RC and for this reason, a noun would not be expected to occur in clause-initial position

in a sentence such as the one under consideration. Hence the specifier marker a- is affixed to the relative predicate (which incidentally contains an agreement marker that refers to the ANT).

These considerations would imply a modification of the effect of the application of Strategy 2, at least as far as the SU position is concerned. In this regard it may be said that when Strategy 2 applies, then the specifier marker a- is affixed in clause-initial position to an agreement marker which refers to the ANT. The initial word of the RC may either be a predicate in the case of the SU position, or a noun, in the case of all other positions.

In terms of the above explanation then, Strategies 1 and 2 would not yield different surface forms for RCs that are formed on the SU position.

2. A reinterpretation of my analysis

In terms of the observations made thus far an alternative view may be adopted which could suggest a reinterpretation of my analysis of the two Strategies, 1 and 2.

Let us for a moment assume that there is a Strategy X whose effect is to affix the specifier marker a- onto *an agreement marker which refers to the ANT*. This is illustrated below, with regard to the SU position.

77. *Umfana [ofike izolo] uyakhala*

'Boy [SpecM-SAM(u)-arrived yesterday] he-is-crying'

'The boy who arrived yesterday is crying'

Let us also assume that there is a Strategy Y whose effect is to affix the specifier marker a- onto an agreement marker that does not refer to the ANT. This is illustrated below with regard to the D0 position.

78. *Inja [isalukazi esiyithandayo] inyamalele*
 'Dog [old-woman SpecM-SAM(si)-likes-RS] it-disappeared'
 'The dog which the old woman likes has disappeared'

This strategy would apply to all the positions on the hierarchy other than SU, namely D0, IO, OBL (including OCOMP) and GEN. This consideration could imply that the SU position represents in fact a 'cut-off' point, since a different strategy, namely Strategy Y is used for the position immediately below it. Note that this would conform to the HCs 1, 2 and 3.

Now the view may be expressed that a sentence such as the following, where Strategy X applies represents a mere promotion of the D0 position to the SU position. Sentence 79 corresponds with 78.

79. *Inja [esalukazi siyayithanda] inyamalele*
 'Dog [SpecM-SAM(i)-old woman she-it likes] it-disappeared'
 'The dog which the old woman likes has disappeared'

This observation would in fact apply to all the other positions on the hierarchy as well. Thus, in terms of this alternative explanation, it is maintained that a change in the surface forms of each position reflects merely a *promotion* of the position concerned to the SU position, which, as pointed out, is the most accessible position on the AH.

Concluding remarks on the alternative viewpoints (1) and (2) - A common aspect of both the above explanations is that there appears to be a tendency in Zulu to form RCs, that will be most easily 'decodable'; this is achieved by affixing the specifier marker a- onto an agreement marker in clause-initial position. This agreement marker which is in fact identical in form with the subject agreement marker, shows agreement with the ANT. Thus it appears as though there is a tendency in Zulu to bring the whole RC into 'subjectival agreement' with the ANT. On this point I should like to reflect certain views which have been expressed by Kuno concerning a functional approach to relativization phenomena.⁶⁶

As noted in 2.1.3, Kuno states that *only themes can be relativized*. In terms of this viewpoint he interprets the AH as being "a hierarchy for accessibility to thematic interpretation of noun phrases."⁶⁷ In this regard he says,⁶⁸

"...the subject is the easiest to relativize because it is easiest to interpret the noun phrase in subject position as the theme of the sentence. It is most difficult to relativize the object of a comparative article because it is most difficult to interpret it as the theme of the sentence."

Given the correctness of Kuno's assumptions, it may be said that in the light of my discussion in this section, there is a tendency in Zulu to bring a whole RC into a relationship with its theme.⁶⁹ This could explain the unusual affixing of an agreement marker onto the initial noun of the RC. If it is assumed that RCs do, in fact, relativize themes then this agreement marker could perhaps be referred to as a thematic agreement marker (TAM).⁷⁰

CHAPTER 4Nominal Relative Clauses - The Syntactic and Semantic
significance of the Relative Suffix *-yo*Synopsis

The significance of the relative suffix -yo has, in my opinion, been underestimated in past studies. Perhaps this has been so because of its apparent haphazard behaviour, in the Bantu languages in which it occurs. This is evident, for example, in Zulu as can be ascertained from 1.4.6, where observations concerning the occurrence/non-occurrence of this formative were noted. In this chapter, the possible origins and derivations of this formative are investigated, and it is shown that through such an investigation, significant insights can be gained in the structure of not only RCs, but other constructions as well, for example, certain interrogative constructions. It is also shown that an understanding of the significance of -yo in Zulu cannot be achieved without the consideration of relevant data from various other Bantu languages.

4.1 Introduction

Wanger notes that in the RCs of certain languages such as Shambala, which lack the specifier marker, the only indicators of "noun-making" are the so-called "noun-forms of the concordial determinatives."¹ These so-called 'concordial determinatives' that he refers to are in fact anaphoric pronouns which are related in form to absolute pronouns. They appear as suffixes on the relative predicates and agree in class with the ANT. Consider, for example, the following instances in Shambala, taken from Wanger,² where the anaphoric pronouns are suffixed to the relative predicate and agree in class with a covert ANT.

1.1 *ji-genda-jo*

'he-goes-AnPro (represents relation with an ANT of Cl. 3 sg.)'
'the going one/he who goes'

1.2 *u-genda-wo*

'it-goes-AnPro (represents relation with an ANT of Cl. 2 sg.)'
'the going one/it which goes'

1.3 *ni-genda-ye*

'I-go-An Pro (represents relation with an ANT of Cl 1 sg.)'
'I the going one/I who go'

Bantuists have generally assumed that the Zulu relative suffix *-yo*, which as illustrated in the sentences below, does not co-vary with the ANT, has etymologically evolved from, or is related to absolute pronouns.³

2. *Umfana [ogulayo] ufuna ukuya ekhaya*

'Boy [CRP-is-ill-RS] he-wants to-go home'
'The boy who is ill wants to go home'

3. *Angithandi izinja [ezilumayo]*
 'Neg Pr-I-like-dogs [CRP-bite-RS]'
 'I don't like dogs which bite'

Assuming the correctness of the above assumption and considering the earlier observations made with respect to Shambala, the question may be asked:

Why does the Zulu suffix not co-vary with the class of the ANT as is the case in Shambala? In other words, why does this suffix have basically only one morphological shape in Zulu, viz. -yo?

The explanation offered in this regard in the literature relates to the commonly held assumption that some type of 'levelling process' ('gelykmakingsproses') or reduction has taken place in Zulu. This has resulted in the emergence of only one form, namely the absolute pronoun of class 5 sg. as relative suffix, irrespective of which class the ANT belongs to. However, assuming the validity of the assumption concerning the levelling process in Zulu, no explanation has been offered in the literature regarding the *principles* which underlie such a process. Consider, for example, the following statement by Wilkes, in which no attempt is made to substantiate the views expressed:⁴

"Volgens van Eden [sic] is hierdie morfeem etimologies verwant aan die absolute voornaamwoord van klas 9/jona/ en was dit oorspronklik waarskynlik slegs gebruik agteraan relatief-konstruksies wanneer die antesedent tot klas 9 behoort. Dieselfde het in die ander klasse gebeur waar die absolute voornaamwoord van die betrokke klas waaraan die antesedent behoort gebruik is. 'n *Gelykmakingsproses* het waarskynlik later ingetree waarvolgens {-jo} vir alle klasse gebruik is. Oorspronklik

het hierdie morfeem gedien om die antesedent te beklemtoon, dog of dit nog vandag die geval is, is te betwyfel."
(Italics---GP)

Other attempts to characterize the origins of this suffix in Zulu or in other South-Eastern Bantu languages have been scanty, as is reflected, for example, in the following quotation from Westphal. Here he refers to the corresponding formative *-ho* that occurs in Venda.⁵

"This is probably borrowed from Sotho: *Motho ya diraxô* where the *-xô* is the suffix corresponding to *-ho*"

In the paragraphs that follow I shall investigate certain relevant properties of the suffix *-yo* in an attempt to answer the question posed on the previous page.

4.2 The significance and origins of *-yo* in Zulu

Before I address the question of the significance and origins of *-yo* in Zulu as such, I wish to show first how a consideration of the nature of certain interrogative constructions in Zulu, may illuminate or bring into perspective the nature of this suffix.

There are specifically two interrogative forms in Zulu that I wish to consider here. The one is a noun-like form *ubani* (sg.)/*obani*(pl.), which expresses an identifying question with regard to humans (roughly equivalent to the English *who*, *whom*). The other is a so-called 'enclitic' *-ni* which is suffixed to verbs and expresses an identifying question with regard to non-humans (roughly equivalent to *what* in English). Consider the following examples:

4. *Uthanda ubani?*
 'You-like who?'
 'Who do you like?'
5. *Wenza-ni?*
 'You-do what?'
 'What are you doing?'

With respect to the use of these question forms, an interesting situation arises in Zulu where a speaker wishes to ascertain, for example, the source of a noise without any presuppositional knowledge of who or what might be causing it. It is observed that he could, for example, ask the following question:

6. *Yini [ebanga umsindo ngaphandle?]*
 'It-is-what [CRP-makes noise outside?]'
 'What is making the noise outside?'

This question can be answered in several ways, but one possible answer that is of interest here, is the one which refers to a human as the agent of the action expressed in 6, e.g.

7. *NguJabulani [olungisa imoto yakhe]*
 'It-(is)-Jabulani [CRP-puts-right motorcar of-his]'
 'It is Jabulani who is working on his motorcar'

If, however, the speaker or questioner presupposes that the noise is caused by a *person*, then he cannot use *yini* as the appropriate question. He would instead have to use *ngubani*. The questioner would in turn expect the answer to incorporate a noun referring to a person. If, on the other hand, a non-personal or non-human agent is assumed by the speaker

to be causing the noise, then the question would involve the enclitic *-ni* (as in 6) and not *ubani*.

A similar situation exists in Xhosa, another Nguni language closely related to Zulu, where the corresponding form of the Zulu *-ni* is *ntoni* and that of *ubani*, *bani*. Consider, for example, the following Xhosa sentences:

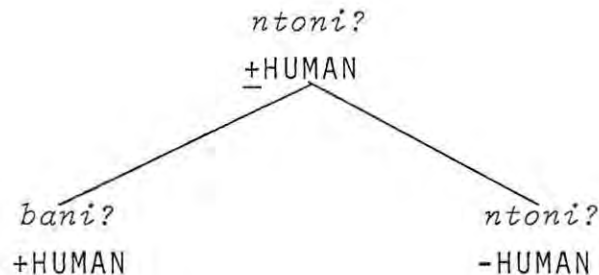
- 9.1 *UThemba ubethe ntoni?*
 'Themba he-hit what?'
 'What did Themba hit?'
- 9.2 *UThemba ubethe bani?*
 'Themba he-hit who?'
 'Who did Themba hit?'

With reference to such sentences Hendrikse and Poulos make the following observations:⁶

"A human or non-human referent may be offered as an answer to the question in 10(a) [my 9.1---GP]. The question posed in 10(b) [my 9.2---GP], on the other hand, definitely presupposes that the object of the action is human.

Thus if the questioner is not sure whether the object of the action in 10 [my 9.1 or 9.2---GP] is human or non-human, he has only one option, and that is to use the question word *ntoni*? If he, for some reason, assumes that the object of the action is human, then he can only use the question word *bani*? Furthermore, if a non-human object is assumed then only *ntoni*? can be used."

These facts, according to Hendrikse and Poulos, suggest that some kind of hierarchy exists between the words *ntoni* and *bani* in Xhosa. They accordingly propose the following diagrammatic representation of such a hierarchy:⁷

Diagram 1

The feature +HUMAN is used in the diagram to refer to human (or personal) referents and -HUMAN to non-human (or impersonal) referents.

If this hierarchy were now applied to Zulu, the question word *ntoni* would be replaced by *-ni* and *bani*, by *ubani*.

With these observations in mind, let us now consider cleft sentences in Zulu in which the status (i.e. human vs non-human) of the referent is not presupposed by the speaker, e.g.,

10. (*Into*) [*oyithandayo*] *yini?*
 '(Thing) [CRP-it-like-RS] (is)-what?'
 'What is it that you like?'

In 10, the use of *into* meaning 'thing' is optional. This noun belongs to class 5 sg. and the clitic pronoun *-yi-* in the verb is employed to refer to it. It is interesting to note that sentence 11 below may be used to convey the same meaning as 10. In 11, the clitic pronoun *ku-* of class 8 is employed.

11. [*Okuthandayo*] *yini?*
 '[CRP-it-like-RS] (is)-what?'
 'What is it that you like?'

Note now that the following answers may be offered to the questions 10 and 11 where the questioned phrase refers to a human. (Incidentally 12.2 is the preferred form).

- 12.1 *Into* [*engiyithandayo*] *ngabantu abanomusa*
 'Thing [CRP-it-like-RS] (are)-people [CRP-have-kindness] '
 'What I like are kind people'
- 12.2 [*Engikuthandayo*] *ngabantu abanomusa*
 '[CRP-it-like-RS] (are)-people CRP-have-kindness '
 'What I like are kind people'

As expected a non-human, i.e. -HUMAN referent may also be used in the answer to questions 9 and 10.

- 13.1 *Into* [*engiyithandayo*] *ngubhiye*
 'Thing [CRP-it-like-RS] (is)-beer '
 'What I like is beer'
- 13.2 [*Engikuthandayo*] *ngubhiye*
 '[CRP-it-like-RS] (is)-beer '
 'What I like is beer'

However, if the question word *ubani* were used instead of *-ni* in 9, then only a human referent would be acceptable in the answer, thus:

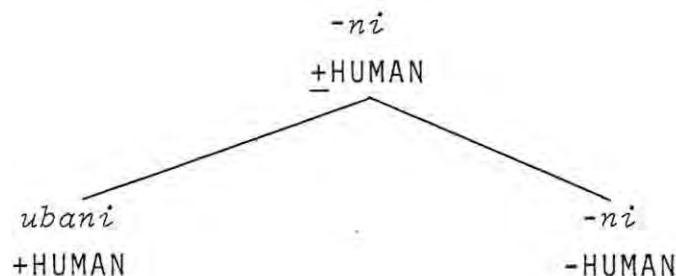
- 14.1 *Ngubani* [*omthandayo*]?
 'It-(is)-who [CRP-him-like-RS]? '
 'Who is it that you like?'

- 14.2 *NguJohn [engimthandayo]*
 'It-(is)-John [CRP-him-like-RS]'
 'It is John that I like'

With respect to sentences 9 to 14, two important observations emerge:

- (i) A hierarchy exists in Zulu which is similar to the one set out by Hendrikse and Poulos for Xhosa. The Zulu hierarchy would take on the following form.

Diagram 2



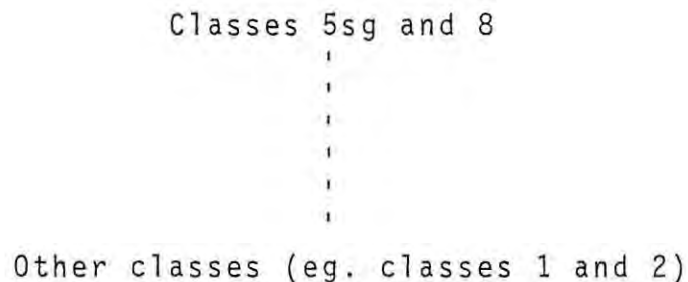
- (ii) When a question is introduced in which the status of the referent (i.e. human vs non-human), is not presumed, then the speaker may choose from the formatives of two classes only, namely classes 5sg. and 8. Thus, for example, in asking the question, *What is it that you like?*, where the status of the referent is *not known*, it would be incorrect to use the SAM of, let us say, cl. 3 sg. Compare, for example, the following sentence with those of 9 and 10 above.

15. **Esithandayo yini?*
 '[CRP-it-like-RS] it-(is)-what?'
 'What is it that you like'

The observation in (ii) could suggest that some type of hierarchy also exists with respect to the *class system* in Zulu. In other words, there appears to be, with respect to the interrogative sentences 9 to 14 above, a reduction or levelling of the classes towards classes 5sg. and 8.

Converting these observations into an interpretation involving hierarchical relations, where the top of the hierarchy represents the position which covers *the widest domain of reference*, the following diagrammatic representation would pertain. In this representation, classes 5sg. and 8 occupy a higher position than other classes, since the domain of reference covered by the former two, is greater than that covered by the other classes.

Diagram 3^a



I believe that a hierarchical relation of the above type has certain important implications. In this regard, I should like to propose the following working hypothesis to explain the reason why the relative suffix in Zulu has basically the form -yo.

If a form/element occupies a high position in a hierarchy then the tendency of it becoming an invariable form in the language is greater than that of any other form/element that occurs below it in the hierarchy.

In other words, I maintain, in terms of this hypothesis, that with regard to the problem at hand, there is a significant relation between the position of forms in a hierarchy and the derivation of invariable forms in a language. Considering diagram 3 then, it is predicted that in the construction under discussion, forms representative of classes 5 sg. and 8 will occur as invariable forms.

Givon, in discussing the semantic features whereby the noun *universe* is classified, makes the following observations, which according to him apply to any system that has a hierarchic structure in terms of the degree of generality of the features:⁹

"It is the *most generic* semantic features that survive longest, and in fact the morphemes carrying them become grammatical-inflectional morphemes."

The phenomenon of diachronic change from the more concrete features to the less concrete or general features, is referred to as *semantic bleaching*, and in this regard Givon offers, inter alia, the following examples:¹⁰

"Thus, for example, the relatively abstract word for 'new' in Bantu (-**bya*) is derived from 'young' and further back from 'child' (-**bi*), with the bleaching process first eliminating the most specific feature [human], then the next-to-most-specific feature [animate]."

A similar process of *bleaching toward the less concrete* may be seen in the history of space-deictic expressions (*this, that*), which always give rise to time-discourse deictic expressions (*the*) but never vice versa. In fact, the most common source of definite articles in language is by bleaching the distal spatial deictic *that*.

A similar process can be observed in the history of indefinite articles, where they invariably enter the paradigm as the more concrete ("referential") numeral *one*, then slowly evolve, via a number of small steps, toward the more abstract ("nonreferential") indefinite marker as in English, German, or French."

In the light of these observations then, it is not surprising that the anaphoric pronoun of class 5sg. has become a grammatically invariable form in the Zulu language. It *is also not surprising* that a dialectal variant of the Zulu relative suffix *-yo*, has the form *-kho* (representing class 8), which is probably the most "bleached" form in terms of its features. Consider the following examples:

16. *Unesi [osebenzayo] uzokusiza*
Unesi [osebenzakho] uzokusiza
*cf. *Unesi [osebenzaye] uzokusiza*
 'Nurse [CRP-works-RS] she-will-you-help'
 'The nurse who is working will help you'
17. *Izitshudeni [ezisebenzayo] zizophumelela*
Izitshudeni [ezisebenzakho] zizophumelela
*cf. *Izitshudeni [ezisebenzazo] zizophumelela*
 'Students [CRP-work-RS] they-will-pass'
 'The students who are working will pass'

These facts no doubt support the working hypothesis set out on page 135.

In the sub-section which follows an attempt is made to throw light on the syntactic and semantic nature of the Zulu relative suffix by investigating issues which relate to its *function* or *functions*. As will be pointed out, such an investigation can explain to a large extent the present peculiar behaviour of this suffix in Zulu and may also contribute to an understanding of the categorial status of the Zulu RC.

4.3 Remarks on the original and present functions of the relative suffix

In order to gain an insight into the original function or functions of the anaphoric pronouns that have given rise to the Zulu relative suffix, an investigation needs to be conducted of relevant data in a number of other Bantu languages. The languages considered in the succeeding paragraphs have been selected because they constitute the kind of empirical data that is needed in order to understand the significance of the Zulu suffix. These languages differ from Zulu in that they have not undergone the process of "semantic bleaching" discussed in the previous sub-section. Facts emerging from the data in these languages could therefore clarify the Zulu situation where, due to "bleaching", the facts tend to obscure the interpretation or understanding of -yo. Thus an attempt is made at reconstructing the situation in Zulu by considering comparative data.

4.3.1 Remarks on the phenomenon of 'Back Reference'

It was noted earlier that in a language such as Shambala,

a relative clause incorporates an anaphoric pronoun which is suffixed to the relative predicate.

Consider once again examples from this language:

18. *ji-genda-jo...*
 'he-goes-An Pro...'
 'the going one/he who goes...'
19. *u-genda-wo...*
 'it-goes-An Pro...'
 'the going one/it which goes...'
20. *ndima nikundayo...*
 'work I-want-An Pro...'
 'the work I want...'

It is significant to note that in each of the above examples, an anaphoric pronoun occurs in the RC which shows agreement with the ANT. Thus, in a language such as Shambala an anaphoric relationship appears to exist between the *ANT* and the *pronoun* that is suffixed to the relative predicate. If the process of semantic bleaching described earlier is accepted as an explanation for the evolvment of the relative suffix *-yo* in Zulu, then it may be stated, in terms of the observations made with regard to the above examples, that one of the original functions of the relative suffix was that of *referring back* to a previously established referent.

Turning to the contemporary situation in Zulu, there is reason to believe that with respect to the relative suffix, the function of 'referring back' to a referent has been

lost. Consider, for example, the following sentence:

21. *Indoda [engiyithandayo] iyagula*
 'Man [CRP-him-like-RS] he-is-illl'
 'The man I like is ill'

In this sentence, a clitic pronoun *-yi-* is employed which agrees in class with the ANT, and in this respect, it performs the same function as the Shambala suffixal pronoun. It is believed here that the occurrence of the clitic pronoun *-yi-* renders the need for *-yo* to function as *anaphoric referer*, redundant. However, it is interesting to note that *-yo* in 21 is obligatorily used. This observation could in fact suggest that the relative suffix's significance as anaphoric pronoun is still felt in this example. There appears, however, to be an alternative explanation for its obligatory occurrence. When the relative predicate in an RC such as the one above is followed by an adjunct, there is a tendency for the relative suffix to be deleted. Consider, for example, the following sentence:

22. *Indoda [engiyithanda kakhulu] iyagula*
 'Man [CRP-him-like-Ø a-lot] he-is-illl'
 'The man [I like a lot] is ill'

This phenomenon, whereby the occurrence of a formative in a verb is governed by the presence or absence of a following adjunct, is not peculiar to sentences which contain RCs. This phenomenon is manifest also in the verb forms of certain tenses, which tend to be shortened when some adjunct follows the verb. What exactly governs these shortenings in these different cases, and they all seem to be related, is unclear at this stage.

Compare the following sentences:

- 23.1 *Umfana uyasebenza*
 'Boy he-is-working'
 'The boy is working'
- 23.2 *Umfana usebenza kakhulu*
 'Boy he-works a-lot'
 'The boy is working hard'
- 24.1 *Abalimi bazisengile*
 'Farmers they-them (the cows)-milked'
 'The farmers have milked them'
- 24.2 *Abalimi basenge izinkomo*
 'Farmers they-milked cows'
 'The farmers have milked the cows'

It should be pointed out that the relative suffix *-yo* may occur in certain instances where the relative predicate is followed by an adjunct. Once again this phenomenon is not peculiar to RCs only, as the examples below illustrate. According to my informant, the occurrence of the so-called 'long form' in each of these cases introduces an element of emphasis into the sentence.¹¹

- 25.1 *Izitshudeni [ezifundayo kakhulu] zizophumelela*
 'Students [CRP-study-RS much] they-will-pass'
 'Students who do study hard will pass'
- 25.2 *Izitshudeni [ezifunda kakhulu] zizophumelela*
 'Students [CRP-study-RS much] they-will-pass'
 'Students who study hard will pass'
- 26.1 *Izitshudeni ziyafunda kakhulu*
 'Students they-study much'
 'The students do study hard'

- 26.2 *Izitshudeni zifunda kakhulu*
 'Students they-study much'
 'The students study hard'
- 27.1 *Izitshudeni zifundile kakhulu*
 'Students they-studied much'
 'The students did study hard'
- 27.2 *Izitshudeni zifunde kakhulu*
 'Students they-studied much'
 'The students studied hard'

In the light of the above observations, it appears as though the RC in Zulu has in fact assumed a significance which is similar to that of certain tense formatives in the language. Clarification on this issue, however, would involve research outside the immediate focus of the significance of -yo.

Let us now consider data in yet another Bantu language, namely Chewa, which is spoken further south than Shambala.¹² Consider first the following sentence:

28. *Mwana alikumwa mkaka*
 'Child-it-is-drinking milk'
 'A child is drinking milk'

If the subject *mwana* has already been referred to in discourse, then it must be accompanied by an anaphoric pronoun in subsequent occurrences of this noun. The anaphoric pronoun used in these instances is a reduced form of the demonstrative pronoun of the 2nd position. Thus with a noun such as *mwana* the demonstrative yo occurs. The full demonstrative form is uyo (cf. the absolute pronoun in this class, iye). In this regard, consider the following sentence:

29. *Mwanayo alikumwa mkaka*

'Child-the-one-I-referred-to it-is-drinking milk'

'The child (the one referred to) is drinking milk'

Note now what happens when a possessive follows *mwana* and when the latter has already been referred to in discourse.

30. *Mwana wa asing'angayo alikumwa mkaka*

'Child of-doctor-the-one-referred-to it-is-drinking milk'

'The doctor's child is drinking milk'

In this sentence the contracted form of the demonstrative, i.e. *yo*, which agrees in class with *mwana*, is suffixed to the noun *asing'anga*. This latter noun functions as the possessor in the possessive construction.

Let us now turn to sentences which incorporate relative clauses.

31.1 *Mwana [$\left\{ \begin{array}{l} amene \\ uyo \end{array} \right\} alikumwa mkakayo] nti wa sing'anga$*

'Child [which it-is-drinking milk-the-one-referred-to] is of the-doctor'

'The child which is drinking milk is the doctor's'

31.2 *Mwana [$\left\{ \begin{array}{l} amene \\ uyo \end{array} \right\} ndimamukondayo] alikumwa mkaka$*

'Child [which I-it-like-the-one-referred-to] it-is-drinking milk'

'The child I like is drinking milk'

- 31.3 *Mwana* [$\left. \begin{array}{l} \text{amene} \\ \text{uyo} \end{array} \right\} \text{ anyamata alikusewera nayeyo}] \text{ alikumwa}$
mkaka
 'Child [which boys they-are-playing with-it-the-one-referred-to] it-is-drinking milk'
 'The child with which the boys are playing is drinking milk'

Note the occurrence in each case of *-yo* in *clause final* position. The presence of *-yo* in this position implies that the ANT is definite in nature, i.e. it is not referred to in discourse for the first time. If the demonstrative does not occur the noun is indefinite, i.e. it is referred to for the first time in discourse. Compare, for example, the following sentence with that of 31.2 above.

- 31.4 *Mwana* [$\left. \begin{array}{l} \text{amene} \\ \text{uyo} \end{array} \right\} \text{ ndimamukonda}] \text{ alikumwa mkaka}$
 'Child [which I-it-like] it-is-drinking milk'
 'A child I like is drinking milk'

The data in Chewa illustrates further the '*anaphoric reference*' significance of the suffixal pronoun under discussion here. An additional observation that emerges from the Chewa data relates to the definite vs indefinite status of the ANT. The presence of the anaphoric pronoun indicates that the ANT is *definite*, whereas its absence indicates that the ANT is *indefinite*. This could very well represent yet a further development of such pronouns in the Bantu languages, i.e. the phenomenon of definiteness and indefiniteness being realized by the occurrence and non-occurrence of demonstrative pronouns respectively.¹³

The Chewa data also raises an interesting question concerning the origin of the Zulu relative suffix. The question may be posed as follows: Is *-yo/-kho* directly

derived from an *absolute* pronoun form, which occurs, for example, in the RCs of a language such as Shambala, or is it directly derived from a *demonstrative* pronoun form, which occurs in the RCs of a language such as Chewa? A more adequate viewpoint might be to assume that the differences in the origin of the suffixal clitics in languages such as Shambala, on the one hand, and Chewa on the other, represent different stages in the development of, or *different typological paths* with respect to, the marking of prior reference in relative clause constructions. Justification for these different hypotheses, however, would require research which would exceed the aims of this study.

Pending further research, I should here like to propose yet a further possible explanation for the problem at hand. Let us assume that the suffixal clitic -yo in the Chewa data above, consists in fact of two different morphemes, namely the consonant y- and the vowel -o. Given the correctness of this assumption, each morpheme would by definition have to then be assigned a specific significance or function. Since the initial morpheme, i.e. y-, co-varies with the class of the ANT, *mwana*, the function of *agreement marking* could be isolated and assigned to this morpheme. The assumption may then be made that -o is the morpheme that functions as the 'anaphoric referer'.

In the light of these assumptions, it may be concluded then that, with respect to the Zulu relative suffix, each of the consonants y and k in -yo and -kho respectively, have, unlike the Chewa and Swahili forms, lost their function as *agreement markers*. This is explainable in terms of the process of semantic bleaching, discussed earlier in this sub-section. With regard to the vowel -o

the 'anaphoric reference' function associated with this morpheme has also been lost.

4.3.2 Nominalizing characteristics

In the paragraphs that follow, an additional significance/function of the Zulu relative suffix is proposed.

Let us begin by considering the examples below:

- 32.1 *Indoda [eyinkosi] ithandwa kakhulu*
 'Man [CRP-(is)-chief] he-is-liked much'
 'The man who is a chief is liked a lot'
- 32.2 **Indoda [eyinkosiyo] ithandwa kakhulu*
- 33.1 *Umfana [onomkhuhlane] akazuya esikoleni kusasa*
 'Boy [CRP -has-cold] will-not-go to-school tomorrow'
 'The boy who has a cold will not go to school tomorrow'
- 33.2 **Umfana [onomkhuhlaneyo] akazuya esikoleni kusasa*
- 34.1 *Ngiyazazi izintombi [ezisebhilidini elikhulu]*
 'I-them-know girls [CRP-they-(are)-in-building] big'
 'I know the girls who are in the big building'
- 34.2 **Ngiyazazi izintombi ezisebhilidiniyo elikhulu*

Interestingly, in examples 32 to 34 above, the relative suffix may *not* be affixed to the relative predicate irrespective of whether the latter is in clause-final position or not.

Now consider the examples below where the occurrence of the relative suffix is obligatory:

- 35.1 *Ngiyazazi izintombi [ezifundayo]*
 'I-them-know girls [CRP-they-study-RS]'
 'I know the girls who are studying'
- 35.2 **Ngiyazazi izintombi [ezifunda]*

Instances also occur in Zulu where the relative suffix is optionally used. In this regard, consider, for example, the following sentences:

- 36.1 *Indoda [engingayithandiyol] iyagula*
 'Man [CRP-not-him-like-RS] he-is-illl'
 'The man I don't like is illl'
- 36.2 *Indoda [engingayithandi] iyagula*
 'Man [CRP-not-him-like-Ø] he-is-illl'
 'The man I don't like is illl'

This optional nature of the relative suffix has led many Bantuists to believe that this formative is in the process of 'disappearing from the language'. In this regard, for example, note the following assumption made by Wilkes:¹⁴

"Die feit dat die gebruik van {-jo} vandag in die meeste gevalle opsioneel is, kan daarop dui dat hierdie morfeem besig is om uit die taalsisteem van Zoeloe te verdwyn."

In the paragraphs that follow, it will be shown that there appears to be no justification for the assumption of such a tendency in Zulu. I shall, in fact, argue that in most cases *there is a valid explanation* for the occurrence/non-occurrence of this suffix, and in my exposition, I shall explicate yet another important function that is associated therewith.

Finally, I cite examples from another South-Eastern Bantu

language, namely Tsonga, where I believe the data weakens even further the common viewpoint expressed in the above quotation.

First, consider again the sentences 32 to 35 above, repeated here as 37 to 40.

- 37.1 *Indoda [eyinkosi] ithandwa kakhulu*
 'Man [CRP- (is)-chief] he-is-liked much'
 'The man who is a chief is liked a lot'
- 37.2 **Indoda [eyinkosiyo] ithandwa kakhulu*
- 38.1 *Umfana [onomkhuhlane] akazuya esikoleni kusasa*
 'Boy-[CRP-has-cold-] will-not-go to-school tomorrow'
 'The boy who has a cold will not go to school tomorrow'
- 38.2 **Umfana [onomkhuhlaneyo] akazuya esikoleni kusasa*
- 39.1 *Ngiyazazi izintombi [ezisebhilidini elikhulu]*
 'I-them-know girls [CRP-they-(are)-in-building big]'
 'I know the girls who are in the big building'
- 39.2 **Ngiyazazi izintombi ezisebhilidiniyo*
- 40.1 *Ngiyazazi izintombi [ezifundayo]*
 'I-them-know girls [CRP-they-study-RS]'
 'I know the girls who are studying'
- 40.2 **Ngiyazazi izintombi [ezifunda]*

A significant observation that emerges from these sentences is that in sentences 37 to 39, where the relative suffix is *obligatorily left out*, the relative predicate is based on a copulative construction. In sentence 40, on the other hand, where the relative suffix *obligatorily occurs*, the relative predicate is based on a verb. It should be noted further that with respect to sentences

37 to 39, the base of the copulative construction is either a noun (*inkosi/umkhuhlane*), or a form derived from a noun (*ebhilidini < ibhilidi*). Thus there appears to be, in the light of the above observations, an incompatibility involving the co-occurrence of the relative suffix and a *non-verbal* element, such as a noun, or a 'nominal-like' element (i.e. a pronoun, or form derived from a noun). The observation may, therefore, be made here that whenever a relative predicate contains a non-verbal form, then the relative suffix may *not* be employed. The following additional examples support this observation:

- 41.1 *Uyise [ongudokotela] uthukuthele*
 'His-father [CRP-(is)-doctor] he-is-angry'
 'His father who is a doctor is angry'
- 41.2 **Uyise [ongudokotelayo] uthukuthele*
- 42.1 *Udadewethu uyithengileinja [esekamelweni]*
 'My sister she-it-bought dog [CRP-(is)-in the room]'
 'My sister has bought the dog which is in the room'
- 42.2 **Udadewethu uyithengileinja [esekamelweniyo]*

Now consider the following sentences where the underlined forms contain what Doke refers to, as 'relative stems':

- 43.1 *Isela lintshontshe imoto [ebomvu]*
 'Thief he-stole car [CRP-red]'
 'The thief stole a red car'
- 43.2 **Isela lintshontshe imoto [ebomvuyo]*
- 44.1 *Umese [obukhali] ukhona ekhishini*
 'Knife [CRP-sharp] it-(is)-present in-kitchen'
 'The sharp knife is in the kitchen'
- 44.2 **Umese [obukhaliyo] ukhona ekhishini*

As noted in 1.4.4.1, Doke observes that the majority of these stems *show derivation from nouns*. These examples further support the observation made above concerning the incompatibility that exists between the relative suffix and a non-verbal element. As regard the so-called *primitive stems* listed by Doke, they, too, *cannot co-occur* with the relative suffix, thus:

45.1 *Kukhona indlela [ebanzi] eduze nomfula*
 'There-(is)-path [CRP-wide] near with-river'
 'There is a wide path near the river'

45.2 **Kukhona indlela [ebanziyo] eduze nomfula*

The fact that the relative suffix cannot co-occur with these primitive stems could be an indication that they were also originally derived from nouns or nominal-like elements. That they were originally derived from other 'parts of speech' has been suggested by, inter alia, Ungerer, as is reflected, for example, in the quotation below,¹⁵ but no justification has been offered in the literature for such a viewpoint:

"Die oorspronklike vorme daarvan moes dus op die een of ander wyse reeds op 'n vroeë tyd-
 stip vir die navorser verlore gegaan het.
 So kon elk van hierdie "primêre relatiefstamme"
 van een of ander woordsoort afgelei gewees
 het, wat op 'n vroeëre tydstep in Zoeloe
 'n volwaardige woord was, of dalk nog is.
 Hieroor kan baie spekulatiewe moontlikhede
 genoem word, maar dit sal moeilik, indien
 nie heeltemal onmoontlik, wees om onomstoot-
 like bewys daarvan te lewer. In hierdie
 studie word in elk geval aanvaar dat selfs
 die "primitiewe relatiefstamme" ook van se-
 kere ander woordsoorte afgelei is."

The considerations outlined in the preceding paragraphs are of significance, since they reveal the 'nominalizing characteristics' associated with the Zulu relative suffix. From the examples listed, it appears as though the relative suffix is used to nominalize relative predicative forms which *are not* or *do not contain NPs as their bases*. Thus any predicative form that is not based on an NP should be able to co-occur with the relative suffix.

A problem, however, arises in this regard, if the sentences below are considered. In these sentences the relative suffix may *never* be employed, and yet the relative predicate in each case is *not based on an NP*.

- 46.1 *Isitshudeni [esizophumelela] yindodana kadokotela*
 'Student [CRP-will-pass] (is)-son of doctor'
 'The student who will pass is the doctor's son'
- 46.2 **Isitshudeni [esizophumelelayo] yindodana kadokotela*
- 47.1 *Uthisha ufuna ukubona izinsizwa [ezide zikhuluma]*
 'Teacher he-wants to-see young-men [CRP-often they-talk]'
 'The teacher wants to see the young men who are often talking'
- 47.2 **Uthisha ufuna uhubona izinsizwa [ezideyo zikhuluma]*
 **Uthisha ufuna ikubona izinsiziva [ezide zikhulumayo]*
- 48.1 *Indoda [ebiphuza] isendlini*
 'Man [CRP-was-drinking] he-(is)-in-hut'
 'The man who was drinking is in the hut'
- 48.2 **Indoda [ebiphuzayo] isendlini*

These sentences appear to make it difficult, if not impossible to maintain the viewpoint that the relative suffix -yo has nominalizing characteristics.

I believe that there is an independent explanation for the non-occurrence of -yo in these cases. Once again a consideration of data in other Bantu languages will throw light on these issues.

First of all it should be noted that in each of the above sentences the relative predicate contains an auxiliary verb or some contracted form of an auxiliary verb. Thus, in 46.1 the future tense form of the verb appears to be a contracted form of: *SpecM-si-za+ukuphumelela*. In 47.1 the auxiliary verb is -de and it governs a complement in the participial form. Finally, the tense form exemplified in 48 appears to be a contracted form of: *SpecM-u-be+iphuza*.

Before offering an explanation for the non-occurrence of -yo in the above sentences let us first determine where this suffix would have been affixed, if in fact it had occurred in such examples.

Let us look at an example in Venda where an auxiliary verb is used in the RC. As may be observed in 49, the relative suffix -ho is affixed to the auxiliary verb -twa and not to the complement:

- 49.1 *Mutukana [a ṭwaho a tshi tamba] ndi n̄wana wa dokotela*
 'Boy [who spends-the-day-RS he-play] (is) son of doctor'
 'The boy who spends the day playing is the son of the doctor'
- 49.2 **Mutukana [a ṭwa a tshi tambaho] ndi n̄wana wa dokotela*

By analogy then, it would be expected that in a sentence

incorporating, for example, the auxiliary verb *-de*, the relative suffix would be affixed to the auxiliary verb itself, as in 47.2. However, such a sentence is unacceptable.

Swahili provides additional information with respect to the problem at hand. Consider the sentences below which incorporate RCs. Swahili like Shambala, employs in an RC an anaphoric pronoun which agrees in class with the ANT. The anaphoric pronoun is underlined in each of the following examples.¹⁶

50. *Mtu* [*a-soma-ye*]...
 'Man [he-reads-An Pro]...'
 'A man who reads...'
51. *Kengele* [*i-lia-yo*]...
 'Bell [it-rings-AnPro]...'
 'A bell which rings...'
52. *Watu* [*wa-soma-o*]...
 'People [they-read-AnPro]...'
 'People who read...'

Note that in each of these examples the anaphoric pronoun is affixed to the relative predicate. Now consider what happens when certain tense prefixes are employed, notably *-na-* indicating a present continuous action; *-li-*, a past action; and *-taka-*, a future action.

53. *Mtu* [*a-* $\left\{ \begin{array}{l} na \\ li \\ taka \end{array} \right\}$ *-ye-soma*]...
 'Person [he $\left\{ \begin{array}{l} pr\ cont \\ past \\ future \end{array} \right\}$ AnPro-reads]...'
 'A person who $\left\{ \begin{array}{l} is\ reading \\ read \\ will\ read \end{array} \right\}$...'

54. *Kengele* [*i-* $\left\{ \begin{array}{l} na \\ li \\ taka \end{array} \right\}$ *-yo-lia*]...
- 'Bell [it $\left\{ \begin{array}{l} \text{pr cont} \\ \text{past} \\ \text{future} \end{array} \right\}$ An Pro-rings]...'
- 'A bell which $\left\{ \begin{array}{l} \text{is ringing} \\ \text{rang} \\ \text{will ring} \end{array} \right\}$...'
55. *Watu* [*wa-* $\left\{ \begin{array}{l} na \\ li \\ taka \end{array} \right\}$ *-o-soma*]...
- 'People [they $\left\{ \begin{array}{l} \text{pr cont} \\ \text{past} \\ \text{future} \end{array} \right\}$ An Pro read]...'
- 'People who $\left\{ \begin{array}{l} \text{are reading} \\ \text{read} \\ \text{will read} \end{array} \right\}$...'

In each of these examples the anaphoric pronoun occurs *immediately after the tense prefix and not at the end of the predicate*. Thus the following rendering of 53 above would be unacceptable,

56. *Mtu* [*a-* $\left\{ \begin{array}{l} na \\ li \\ taka \end{array} \right\}$ *-soma-ye*]...

Similar observations are made with reference to the negative formative *si*, hence,

57. *Mtu* [*a-si-ye-soma*]...
- 'Man [he-not-AnPro-reads]...'
- cf. **Mtu* [*a-si-soma-ye*]...

If an object clitic were to be incorporated in the relative predicate, then this clitic and the anaphoric pronoun would occur in juxtaposition. In such cases, the object agreement marker follows the anaphoric pronoun.

In this regard, consider, for example, the following sentence.

58. *Kitabu [a-na-cho-ki-soma Hamisi]...*
 'Book [he-is-An Pro- OAM-reading Hamisi]...'
 (OAM = Object Agreement Marker)
 'The book which Hamisi is reading...'

Compare the above sentence now with 59 where no tense prefix is employed.

59. *Kitabu [a-ki-taka-cho Hamisi]...*
 'Book [he-OAM-wants-An Pro Hamisi]...'
 'The book which Hamisi wants...'

Thus it may be concluded that in Swahili the position of the anaphoric pronoun is determined by the occurrence/non-occurrence of certain tense and negative prefixes. Interestingly, these prefixes appear to be traceable to auxiliary verbs. For example, *-li-* appears to be associated with the verb-to-be *-li*, which is manifest in, inter alia, copulative constructions. In this regard consider the following example.

60. [*A-li-ye (ni) mpishi...*]
 '[Who-cop-An Pro cook...]'
 'He who is a cook...'

It appears from the above observations then, that the anaphoric pronoun or relative suffix occurs immediately after the first verb in a compound tense, i.e. the auxiliary verb, or any contracted form of such a verb.

In Zulu, however, there does not appear to be any evidence

at all of the relative suffix being affixed to the auxiliary verb in such constructions. What are the reasons underlying this anomaly? I should like to offer the following assumptions as possible solutions to this problem.

Consider once again sentence 47.1, repeated here as 61. In the RC of this sentence, a full auxiliary verb occurs.

61. *Uthisha ufuna ukubona izinsizwa [ezide zikhuluma]*
 'Teacher he-wants to-see young-men [CRP-often they talk]'
 'The teacher wants to see the young men who are often talking'

Although a detailed study of the characteristic properties of auxiliary verbs does not concern us here, I believe that a few relevant observations could throw light on the issue at hand. These are listed below:¹⁷

- (i) Auxiliary verbs cannot stand alone; they must always be followed by a complement. In this regard, compare the following grammatical and ungrammatical sentences. The auxiliary verb *-cishe* expresses the idea of 'nearly, almost'.

- 62.1 *Amanzi asecishe abile*
 'Water it-now-almost it-boil'
 'The water is now almost boiling'

- 62.2 **Amanzi asecishe*

- (ii) As Cole notes, these verbs "usually occur only in a limited series of tenses, and are not capable of the full range of conjugation."¹⁸ For example, the auxiliary verb *-lokhu/-yilokhu* which expresses the

idea of 'to keep on doing', cannot occur in perfect tenses.

63.1 *Abantu bebeyilokhu bekhononda ngokudla*
 'People they-kept-on they-complain about-food'
 'The people kept on complaining about the food'

63.2 **Abantu beyilokhe bekhononda ngokudla*

The verb, *-lokhu/-yilokhu* reveals another interesting characteristic of auxiliary verbs, namely that many of them do not take the various suffixes of the different tense forms. Note in 63.1, for example, the absence of the characteristic vowel a of the past continuous tense.¹⁹

- (iii) Finally, some auxiliary verbs, in the words of Cole, "savour very much of conjunctives in their function and significance."²⁰ In this regard, consider the following examples, where the auxiliary verb *-hle* expressing the idea of 'likely to happen' is employed. The potential formative -nga- occurs in each case.

63. *Ngingahle ngiyithole imali...*
 'I-might I-it-get money...'
 'I might get the money'

64. *Lempohlo ingahle iphindele esibedlela...*
 'This-bachelor he-might he-return to-hospital...'
 'This bachelor might return to hospital'

Now in each of these sentences, the subject agreement markers ngi- and i- may be omitted from the auxiliary verb resulting in a form which appears

to function as a conjunctive, hence:

65. *Ngahle ngiyithole imali...*
 'Might I-it-get money'
 'I might get the money'
66. *Lempohlo ngahle iphindele esibedlela*
 'This-bachelor might he-return to hospital'
 'This bachelor might return to hospital'

The above observations alone leave no doubt that *the auxiliary verbs in Zulu manifest many non-verbal characteristics or properties*. Their status as verbs is questionable from a morphological, syntactic and semantic point of view.

It is therefore not surprising that the relative suffix, which is generally associated with verbs does not occur in compound tenses in Zulu. The fact that an auxiliary has the potential of functioning like a conjunctive, alone renders the nominalizing function of such a suffix redundant.

Now let us return to sentences 46.1 and 48.1 here repeated as 67.1 and 67.2.

- 67.1 *Isitshudeni [esizophumelela] yindodana kadokotela*
 'Student [CRP-will-pass] (is)-son of-doctor'
 'The student who will pass is the doctor's son'
- 67.2 *Indoda [ebiphuza] isendlini*
 'Man [CRP-was-drinking] he-(is)-in-hut'
 'The man who was drinking is in the hut'

I believe that the non-occurrence of *-yo* in these instances, immediately after *-zo-* and *-b-* respectively could indicate that there has been a weakening of the 'verbal force'

of these formatives in Zulu; an implication of this would be that -zo- and -b- behave like other non-verbal forms.

In certain Bantu languages, an interesting phenomenon is manifest with regard to the occurrence of the relative suffix in the future tense. I refer here to languages such as, for example, Northern Sotho. In this language the relative suffix may either be suffixed immediately after the future tense formative *or* after the verb stem. The occurrence of the relative suffix after the future tense formative, could indicate that in such languages, this latter formative still enjoys *verbal status*. Compare the following two Northern Sotho examples:²¹

- 68.1 *Ngwana [yo a tla kitimago]...*
 'Child [who will it will run RS]...'
 'The child who will run...'
- 68.2 *Ngwana [yo a tlagō kitima]...*
 'Child [who it will-RS run]...'
 'The child who will run...'

One additional observation need be made here with respect to the relative suffix in Zulu. This concerns the optional occurrence of this suffix after the so-called perfect suffix -ile. Consider the following sentence:

69. *Umfana [{ ofundileyo }] uzophumelela*
 { ofundile }
 'Boy [{ CRP-studied-RS }] he-will-pass'
 { CRP-studied }
 'The boy who has studied will pass'

The optional occurrence of the relative suffix in this construction is interesting. I believe its inclusion

in this construction relates to the fact that the perfect suffix *-ile* functions as a tense affix whose 'verbal force' is still felt, unlike the case of *-zo-* and *-b-*. For this reason the relative suffix *-yo* may co-occur with it. This view, I believe, is not far-fetched. In fact, I believe this one observation alone provides evidence that the perfect suffix is in fact related to, or derived from the tense prefix *-li-*, which, for example, indicates a past tense form in Swahili and which in turn is related to the copulative prefix (or verb-to-be *-li*). Compare the following Swahili examples:²²

70.1 *Ulicheza*

'You-past-play'

'You played'

70.2 [*Uliyecheza*]

'[You-past-An Pro-play]'

'You who played'

70.3 *Sisi tulio wageni...*

'We we-cop-An Pro strangers...'

'We who are strangers...'

From the discussion in the preceding paragraphs, it is clear that there are valid reasons for the occurrence and/or non-occurrence of the relative suffix in certain Zulu constructions. With respect to the viewpoint expressed that this suffix is in the process of disappearing from the language, I should like here to refer to relative clause constructions in Tsonga, where I believe a possible further phonological *development* of this suffix in a Bantu language has taken place. In this language the consonant characterizing the relative suffix is *-k-*. By analogy to the discussion presented in 4.2, I believe that this consonant is the same as that which occurs in the anaphoric pronoun of

class 8 in this language, namely *kona*. A very interesting phenomenon is manifest, however, with respect to the form of the vowel in this suffix. Compare the following examples:

- 71.1 *Vanhu* [*lava va xavaka*]...
 'People [who they buy-RS]...'
 'People who buy...'
- 71.2 *Vanhu* [*lava va nga xaviki*]...
 'People [who they not buy-RS]...'
 'People who do not buy...'

As is evident in the above two examples, the vowel o- of the relative suffix and hence, I believe, all its functions have disappeared. It has, however, been replaced by a vowel which is phonologically identical to the vowel of the preceding syllable. Thus an assimilation process has taken place, whereby the relative suffix in this language has taken on the final vowel of the verb stem. The occurrence of this phenomenon in Tsonga could in my mind represent a later stage in the development of the relative suffix, which cannot be overlooked as a possible future development of the suffix yo in Zulu.

In this section I have investigated the properties that characterize the relative suffix in Zulu. I have attempted to answer the question raised in chapter 1 concerning this suffix, and in so-doing I believe I have shown how, through an understanding of the origins and present nature of this formative, an insight can be gained in the nature/structure of relative clauses as well as some other constructions.

CHAPTER 5Nominal Relative Clauses - Some
additional considerationsSynopsis

*In this chapter, three aspects of Nominal RCs are discussed. The first deals with a reexamination of the distinction between direct and indirect RCs. It is shown that such a distinction, which has characterized traditional works on Zulu RCs, is not justifiable. The second aspect concerns the subject agreement marker of class 1 sg. Two forms occur in this class and in my discussion an explanation is provided for the distribution of these two forms in terms of pragmatic considerations. Finally, an investigation is undertaken of the RC pronoun and it is, *inter alia*, shown that certain typological generalizations that have been made on the occurrence of this pronoun, apply to the Zulu situation as well.*

5.1 The fallacy of the distinction between direct and indirect relative clauses and a reconsideration of aspects of the subject agreement marker

5.1.1 Introduction

As noted in 1.4.3ff, Doke classified the relative construction in Zulu into two distinct types, namely:

- (i) The relative construction of direct relationship
- (ii) The relative construction of indirect relationship

Two correlative *criteria* or *parameters*¹ were used by Doke and others in developing the distinction between types of RCs. These may be set out as follows:

- (i) the covert syntactic function of the ANT in the RC
- (ii) the absence/presence of agreement between the 'relative concord' and the ANT.

The interrelatedness of these two parameters may be summarized as follows: Whenever a distinction between a direct and indirect RC is made in terms of parameter (i), the distinction is simultaneously reflected in the absence or presence of concordial agreement between the 'relative concord' and the ANT.

In terms of this characterization it may be noted that both function and 'concord' were invoked together by traditional Bantuists.

Concerning parameter (i), the relationship between an RC and its ANT is considered to be *direct*, whenever the ANT functions as the subject of the relative predicate. As a

consequence, the relative predicate shows concordial agreement with the ANT. Consider, for example, the following sentence, where the ANT *izitshudeni* functions as the subject of the relative predicate. Note the occurrence of the SAM -zi- in the relative predicate which indicates concordial agreement with the ANT.

1. Izitshudeni [ezifunda isizulu] zizophumelela
 'Students [SpecM-SAM-study Zulu] they-will-pass'
 'The students who are studying Zulu will pass'

When the ANT does not function as the subject of the relative predicate, then the relationship between the RC and the ANT is considered to be indirect. Obviously, in such cases there can be no subjectival concordial agreement between the ANT and the relative predicate. Consider, for example, the following sentence where the ANT *izitshudeni* functions as the direct object of the relative predicate. Note that the SAM -ba- in the relative predicate does not agree with the ANT, but with the subject of the predicate instead:

2. *Izitshudeni* [abantwana bami abazithandayo] zifunda isizulu
 'Students [children of-me SpecM-SAM-them-like-RS] they-study Zulu'
 'The students whom my children like study Zulu'

Incidentally, the function of the ANT within *the main clause* does not appear to play any role in the distinction between direct and indirect RCs. Thus, for example, the relationship between the ANT *izitshudeni* and the RCs in each of sentences 1 and 2 above, would not alter if the function of *izitshudeni* within the main clause were to

change. Consider sentences 3 and 4 below which correspond to 1 and 2 respectively. In sentence 3 *izitshudeni* functions as direct object of the main clause and yet the relationship between it and the RC remains direct.

In sentence 4, where *izitshudeni* functions as direct object of the verb in the main clause, the relationship between it and the RC remains indirect.

3. *Ngiyazazi izitshudeni [ezifunda isizulu]*
 'I-them-know students [SpecM-SAM-study Zulu]'
 'I know the students who are studying Zulu'
4. *Uthisha ukhuluma nezitshudeni [abantwana bami abazithandayo]*
 'Teacher he-talks with-students [children of-me SpecM-SAM-them-like-RS]'
 'The teacher is talking to the students whom my children like'

With respect to the form of *the SAMs* in direct and indirect RCs, those used in the former type of clause are *identical* to those used in the latter type, *with the exception of class 1 sg.* In this regard Doke notes,²

"...the relative concord used in indirect relationship differs from that used in direct relationship in the 3rd person Class 1 singular form, which is *a-* in place of the direct *o-*. In this connection contrast the following:

Direct (subjectival):

umuntu ombonayo (the person who sees him)

Indirect (objectival):

umuntu ambonayo (the person whom he sees)."

Taking into consideration the composite nature of the 'relative concord', the above observation could be interpreted to mean that the SAM used for Class 1 sg. in direct RCs is u-, while that used in indirect RCs is a-. Consider and contrast the following two additional examples:

5.1 *Umfana [okushayileyo] uhambile*

'Boy [SpecM-SAM(u)-you-hit-RS] he-left'

'The boy who hit you has left'

5.2 *Inja [umfana ayithengileyo] iyagula*

'Dog [boy SpecM-SAM(a)-it-bought-RS] it-is-ill'

'The dog that the boy bought is ill'

Although not explicitly stated by Doke, an implication of the observation made above by him, is that the form of the 'relative concord' used in class 1, or more specifically the SAM, reflects a distinction between direct and indirect RCs. In other words, *whenever the SAM u- occurs, the relationship between the ANT and the RC is direct, and whenever a- occurs, the relationship is indirect.*

Consider now the forms of SAMs in some of the other classes. Classes 1 pl., 3 pl. and 4 sg. are exemplified below. The first sentence in each pair contains direct RCs, while the second contains indirect RCs. Note that in each class the underlined SAM is identical in form in both direct and indirect RCs. This applies to all the other Zulu noun classes as well.

Class 1 pl.

6.1 *Abafana [abafike izolo] bafuna ukukubona*

'Boys [SpecM-SAM(ba)-arrived yesterday] they-want to-you-see'

'The boys who arrived yesterday want to see you'

- 6.2 *Uthisha* [*abafana abakhuluma naye*] *uyamazi ubaba*
 'Teacher [boys SpecM-SAM(ba)-talk with-him] he-
 him-knows my-father'
 'The teacher with whom the boys are talking knows my
 father'

Class 3 pl.

- 7.1 *Amakati* [*aphuza ubisi*] *athengiwe izolo*
 'Cats [SpecM-SAM(a) -drink milk] they-were-bought
 yesterday'
 'The cats that are drinking milk were bought yester-
 day'
- 7.2 *Ibhola* [*amakati adlala ngalo*] *likhulu*
 'Ball [cats SpecM-SAM(a)-play with-it] it-(is)-big'
 'The ball with which the cats are playing is big'

Class 4 sg.

- 8.1 *Isitshudeni* [*esisize isiguli*] *yindodana yenkosi*
 'Student [SpecM-SAM(si)-helped-patient (is)-son of-
 chief]'
 'The student who helped the patient is the son of
 the chief'
- 8.2 *Inja* [*isitshudeni esiyithandayo*] *inyamalele*
 'Dog [student SpecM-SAM(si)-it-likes-RS] it-disappeared'
 'The dog which the student likes has disappeared'

In the sub-sections that follow, the classification of Zulu RCs into two types, namely direct and indirect, is reexamined. In the investigation, I show certain inadequacies in the criteria that underlie this classification and in doing so, show that a *distinction* between direct and indirect RCs in Zulu

is unjustifiable. Certain aspects of the SAM in relative predicates are also investigated and an explanation is offered for the distribution of the different forms in class 1 sg., namely u- and a-.

5.1.2 A reexamination of the distinction between direct and indirect relative clauses

In this sub-section, two issues are isolated which reveal certain inadequacies in the classification of RCs into two types, direct and indirect.

The first issue has been adequately dealt with by Hendrikse in his discussion of Xhosa RCs and concerns the failure on the part of traditional Bantuists to draw a distinction between the terms *logical subject/object* and *grammatical subject/object*. Many of the observations made by Hendrikse apply to Zulu RCs as well,³ and in view of this, only certain important considerations need be highlighted here.

The second issue relates to a consideration of RCs that result from the employment of Strategy 1 on the one hand, and Strategy 2 on the other. It is shown that when Strategy 2 applies, a SAM always occurs in the RC, which shows agreement in class with the ANT, irrespective of the relationship that exists between the ANT and the relative predicate.

5.1.2.1 Logical vs grammatical function

As noted in the preceding sub-section the *function* of the ANT in the RC has played a crucial role in the traditional classification of RCs into two types, direct and

indirect.

In the analysis presented by Doke and others, however, one important consideration was overlooked. This concerned the distinction between *logical* and *grammatical* function. This distinction may be illustrated by first considering two simplex sentences. Sentence 9.1 is an example of what is generally referred to as an *active* sentence and 9.2 is the corresponding *passive* form thereof.

9.1 *Isitshudeni sifunda incwadi*

'Student he-reads letter'

'The student is reading the letter'

9.2 *Incwadi ifundwa yisitshudeni*

'Letter it-is-read by-student'

'The letter is being read by the student'

In sentence 9.1 the verb *sifunda* shows concordial agreement with *isitshudeni* and in 9.2 the agreement is with *incwadi*. Thus from a *grammatical* point of view, *isitshudeni* functions as the subject of the verb in 9.1, and *incwadi* functions as the subject of the verb in 9.2. However, it should be noted that from a *logical* point of view, the agent carrying out the action of reading is *isitshudeni* in both sentences. Thus *isitshudeni* performs the same *logical* function with respect to the verb in both cases, namely that of *subject*. Similarly *incwadi* refers to the 'object' that is being read *in both sentences*. In other words, it performs the same *logical* function with respect to the verb in both cases, namely that of *object*.

Now consider the following two sentences. In terms of Doke's analysis the RC in sentence 10.1 is *indirect*, and that of 10.2, *direct*.

- 10.1 *Incwadi [isitshudeni esiyifundayo] inde*
 'Letter [student SpecM-SAM(si)-it-read-RS] it-
 (is)-long'
 'The letter that the student is reading is long'
- 10.2 *Incwadi [efundwa yisitshudeni] inde*
 'Letter [SpecM-SAM(i)-be-read by-student] is long'
 'The letter that is being read by the student is
 long'

It should be noted that in sentence 10.1, the parameters of logical and grammatical function coincide. The ANT *incwadi* functions as both the logical and grammatical object of the relative predicate. For this reason there is no subjectival concordial agreement between the ANT and the relative predicate and in terms of Doke's analysis the RC is classified as *indirect*.

A discrepancy, however, arises in sentence 10.2 where the two parameters yield contradictory results. The SAM i- in the relative predicate agrees in class with the ANT *incwadi*, and thus from a grammatical point of view, the ANT functions as subject. The *logical* function of the ANT, however, remains that of *object*. In terms of the parameter of grammatical function then, the RC is classified as *direct* while in terms of the parameter of logical function, it is *indirect*.

From the above observations it is clear that the classification of the RCs in 10.1 and 10.2 into two distinct types, namely indirect and direct, blurs the fact that the logical function between the ANT and the relative predicate is *identical* in both cases. The view may be expressed here that the classificatory problem identified in these two sentences, is in some way related to the *active* vs *passive* status of the RCs in 10.1 and 10.2.

However, the examples below and the following discussion show that this viewpoint does not hold.

- 11.1 *Iyunivesithi [amadodana ami afunda kuyo] inkulu*
 'University [sons of-me SpecM-SAM(a)-study in-it]
 it-(is)-big'
 'The university at which my sons study is big'
- 11.2 *Iyunivesithi [efunda amadodana ami] inkulu*
 'University [SpecM-SAM(i)-study sons of-me] it(is)
 big'
 'The university at which my sons study is big'

Sentence 11.1, according to Doke's analysis, contains an *indirect* RC, whereas 11.2 contains a *direct* RC. The classification of the RC in 11.1 as indirect is unproblematic, since the ANT functions as the oblique object of the relative predicate, and as is to be expected there is no subjectival concordial agreement between the ANT and the relative predicate. Sentence 11.2, however, which is an approximate paraphrase of 11.1 presents certain problems. In this sentence, the logical function with respect to the relative predicate is identical to that expressed in 11.1. There is, however, subjectival concordial agreement here with the ANT, and for this reason alone, the RC in the sentence has been called a *direct* RC. Thus the distinction between direct and indirect RCs in terms of parameters (i) and (ii) set out earlier in this section, yield unsatisfactory results with respect to this sentence. According to the function parameter, the RC in 11.2 should be classified as *indirect*. However, in terms of the parameter of subjectival concordial agreement, it should be classified as *direct*.

The discussion thus far has revealed a traditional misconception of the notion, *function*, as implied in terms such as *subject of*, *direct object of*, *oblique object of*, etc,

and as a result, the very distinction between *direct* and *indirect* is questionable. In the following discussion, certain considerations relating to the employment of Strategies 1 and 2 contribute further to the questionableness of such a distinction.

5.1.2.2 Considerations relating to the employment of Strategies 1 and 2

Consider the sentences below, where Strategy 1 has been employed in the formation of the RCs.

12. *Indoda [ubaba ashaye izinja zayo] ithukuthele*
 'Man [my-father SpecM-SAM-hit dogs of-him] he-is-angry'
 'The man whose dogs my father hit is angry'
13. *INGisi [ubaba ahlala endlini yalo] liyavilapha*
 'Englishman [my-father SpecM-SAM-stays in-hut of-him] he-is-lazy'
 'The Englishman in whose hut my father is staying is lazy'
14. *Inja [umfana ayithengileyo] iyagula*
 'Dog [boy SpecM-SAM-it-bought-RS] it-is-ill'
 'The dog which the boy bought is ill'

In each of the above sentences, the ANT performs a function other than subject, with respect to the relative predicate. For this reason the SAM in the relative predicate does not agree in class with the ANT. From a logical as well as a grammatical point of view then, each of the clauses illustrated above, would, in terms of Doke's analysis, be classified as *indirect*.

Now consider the form of RCs that surface as a result of the employment of Strategy 2. Sentences 15, 16 and 17 below correspond with 12, 13 and 14 respectively. The perceptual differences that exist between these two groups of sentences do not concern us here.⁴

15. *Indoda [ebaba ushaye izinja zayo] ithukuthele*
 'Man [SpecM-SAM-my-father he-hit dogs of-him] he-is-angry'
 'The man whose dogs my father hit is angry'
16. *INgisi [elibaba uhlala endlini yalo] liyavilapha*
 'Englishman [SpecM-SAM-my-father-he-stays in-hut of him] he-is-lazy'
 'The Englishman in whose hut my father is staying is lazy'
17. *Inja [emfana uyithengile] iyagula*
 'Dog [SpecM-SAM-boy he-it-bought] it-is-ill'
 'The dog which the boy bought is ill'

As was the case with the corresponding sentences 12, 13 and 14, the ANT in each of the above sentences performs a function other than subject with respect to the relative predicate. In other words, the relationship between the ANT and the relative predicate in each of the above sentences, would in terms of Doke's analysis, be classified as *indirect*. This is reflected in the fact that no class agreement exists between the ANT and the SAM of the relative predicate.

However, it should be noted that the *SAM of the CRP*⁵ which occurs in clause-initial position in these sentences *does, in fact, show class agreement with the ANT*. Consider, for example, the formation of *ebaba* in 15 from: SpecM(a) + SAM(a) + (u)*baba*. Here *i* refers to the ANT *indoda*.

In this respect each of the RCs in sentences 15, 16 and 17 would be classified as *direct*, in terms of Doke's analysis. In fact all RCs that are formed by Strategy 2, would be classified in this way by virtue of the fact that whenever this strategy is employed the SAM of the CRP *always agrees in class with the ANT*.

Thus a situation exists, where an RC would be classified as *indirect* when Strategy 1 is employed, but as *direct* when Strategy 2 is employed. Consider, in this regard sentences 14 and 17, here repeated as 18 and 19 respectively.

18. *Inja [umfana ayithengileyo] iyagula*
 'Dog [boy SpecM-SAM-it-bought-RS] it-is-ill'
 'The dog which the boy bought is ill'
19. *Inja [emfana uyithengile] iyagula*
 'Dog [SpecM-SAM-boy he-it-bought] it-is-ill'
 'The dog which the boy bought is ill'

In each of these two sentences the ANT performs the same function with respect to the relative predicate. However, its relationship with the relative predicate in sentence 18, would in terms of Doke's analysis be considered *indirect* whereas in 19, it would *be direct*.

In terms of these and earlier considerations, the distinction between *direct* and *indirect* cannot be upheld here. Such a distinction plays no significant role in our understanding of the different surface forms of Zulu RCs. These are preferably accounted for in terms of a-affixing strategies and simple agreement rules.

5.1.3 The subject agreement marker of class 1 sg.

As already noted, the SAM of class 1 sg. may assume two forms, namely u- and a-, the resultant CRP forms being o- and a- respectively. In this sub-section, I shall attempt to provide an explanation for the distribution of these two forms. Before I do so, I would first like to consider another viewpoint that has been proposed as an explanation for this phenomenon which occurs fairly widely in Bantu languages.

Benji Wald has noted the occurrence of this alternation in UMBundu and offers the formal account outlined below for it.⁶

Compare, first, the following UMBundu sentences taken from Wald.⁷ The position of the SAM is underlined in each case.

20.1 *Ulume* [*una* *okasi* *okulya olusi*] *unene*
 'Man [that CRP-eats-fish] he-(is)-big'
 'The man who is eating the fish is big'

20.2 *Olusconi* [*luna ulume* *akasi* *okulya*] *lunene*
 'Fish [that man CRP-eats] it-(is)-big'
 'The fish which the man is eating is big'

Wald argues that the change from o- to a- may be ascribed to the "movement of the relativized NP over the verb,"⁸ and states that support for this analysis comes from other sources, namely interrogative and negative constructions,⁹

"This all strongly suggests that when a noun moves over a verb in a transformation of a certain type o>a is operant [sic]. It is

thus not a transformation-specific rule but provides evidence that in relativization, the relativized NP is moved rather than deleted where it stands. I suggest that the structural description that relates the negative, interrogative, and relative transformations is a category symbol dominating the main S, which attracts a noun in that S from behind the main verb of that S."

Wald, however, runs into immediate difficulty with the above viewpoint, when he considers a sentence such as 21 below, where the CRP o-, and not a- would be expected to occur. His attempt to explain the discrepancy which arises here, reveals a striking weakness in his argumentation.

21. *Ulume [una omo^hahē amwⁱwa lufeko] wasanjuka*
 'Man [that son-his he-was-seen by-girl] he-(is)-happy'
 'The man whose son was seen by the girl is happy'

With respect to the occurrence of a- in this sentence, Wald says,¹⁰

"It appears then that movement over the verb is not the correct generalization since omo^hahē for omo^a wa (ulume) always preceded the verb. Since all my data was collected from one informant I do not know whether this construction, (47) [my 21---GP], is typical of Umbundu speech community, i.e. whether it is variable, dialectal, or idiosyncratic. Judging by my one informant if a grammatical change is involved in extending the o/a alternation to constructions like (47) [my 21---GP] it is complete [sic]. Given that most of the evidence points to the conditions for o/a as being the movement of a NP over a verb, the Umbundu generalization is that any movement of the relativized noun from its original position during the relativization transformation will register the change of o to a.

This leaves only the subject relativized noun unaffected since this NP moves vacuously, i.e. not at all."

If one were to assume that the so-called 'o-/a- alternation' in UMBundu is similar to that which occurs in Zulu, and indeed this is what Wald claims,¹¹ then I should like to show in the exposition of my analysis which follows, that this 'alternation' has nothing whatsoever to do with 'the movement of a relativized NP'. Firstly, let us compare certain non-RC environments in Zulu which illustrate the occurrence of the two subject agreement markers u- and a- in class 1 sg. (In each of the sentences below, the SAM is underlined).

Declarative (positive)

- 22.1 *Uthisha uzofika kusasa*
 'Teacher he-will-arrive tomorrow'
 'The teacher will arrive tomorrow'
- 22.2 **Uthisha azofika kusasa*

Declarative (negative)

- 23.1 *Udokotela akayithenganga imoto*
 'Doctor Neg Pr-he-bought motorcar'
 'The doctor didn't buy the motorcar'
- 23.2 **Udokotela a(w)uyithenganga imoto*

Subjunctive

- 24.1 *Mnike iswidi hleze akhale*
 'Him-give sweet lest he-cries'
 'Give him the sweet so that he doesn't cry'
- 24.2 **Mnike iswidi hleze ukhale*

Potential

- 25.1 *Isalukazi sithi angabhukuda*
 'Old-lady she-says he-may-swim'
 'The old lady says he may swim'
- 25.2 **Isalukazi sithi ungabhukuda*

Participial

- 26.1 *Ngimbonile umntwana edlala ibhola*
 'I-him-saw child he-play football'
 'I saw the child playing football'
- 26.2 **Ngimbonile umntwana udlala ibhola*

It is clear from the above examples that the two markers u- and a- occur in specific environments. The question that arises here is: Why are there two agreement markers in class 1 sg. and why do they have the respective distributions illustrated?

I believe that certain observations made by Givon concerning morphological, syntactic, semantic and pragmatic information in main and subordinate clauses could provide an answer to this question.

Givon makes the important claim that subordinate clauses exhibit more morphological and syntactic conservatism than is the case with main clauses. In other words, the more 'preserved' morphological and syntactic forms are likely to be found in subordinate clauses. He substantiates this viewpoint by referring, for example, to the phenomenon of *word-order* in main and subordinate clauses:¹²

"There is a wealth of evidence suggesting that the major mechanism for word-order change involves the "downward" *reevaluation* of more marked pragmatic word orders involved in various topic-focus operations, so that eventually they are re-interpreted as the neutral pattern. The more-marked pragmatic variants turn out to be overwhelmingly what Emonds (1970) calls root transformations, which are limited primarily to main clauses, or to more assertional clauses (Hooper and Thompson, 1973). Therefore, since the mechanisms primarily responsible for word-order innovation are in operation mostly in main-assertional clauses, obviously the syntax of these clauses is going to reflect the more innovative word-order, while the word-order of subordinate clauses is going to be more conservative."

With respect to morphology, Givon expresses similar ideas:¹³

"...there are some "freezing" phenomena that may have to do with the nounlike rigidity of nominalized or frozen clauses and that, quite often, marks them as a "graveyard" area for older morphology. An interesting case involves WH-questions and cleft constructions in Bantu, where the older Bantu copula *ni* seems to survive as a relic long after it had disappeared from the neutral sentential pattern. Since, in general, embedded clauses — relative, V-complements, ADV-clauses — are of a nominalized pattern in many languages, the chances of both syntactic and morphological conservatism in these frozen, quasi-lexi-

calized constructions is obviously high."

Finally, he states,¹⁴

"To the extent that semantic elaboration and expressive innovation carries more communicative weight in the clause type that contains the bulk of new information in discourse, one would indeed expect more presuppositional-marked sentence types to exhibit less innovation and thus be "more conservative."

Let us now return to sentences 22-26. With respect to the distribution of u- and a- in these sentences, the following generalization may be made: u- occurs in positive main declarative sentences¹⁵ and a- or its variants, elsewhere (including subordinate clauses). Let us now assume that, in the light of Givon's claims, u- represents the more innovative form and a- the more conservative one. A problem immediately arises in this regard, however, since sentences 23 and 25 appear to counter the above generalization. Two questions may now be asked:

- (i) Why does the negative verb of a main sentence (cf 23.1) contain a SAM -ka-, which appears related to the marker a- found in subordinate clauses?; and
- (ii) Why does the potential form of the verb in 25.1 contain the SAM a- and not u-, since it overtly occurs as the *main* predicate of the sentence?

I believe that certain views expressed by Givon could throw light on the question posed in (i). He makes certain interesting observations concerning the occurrence/non-occurrence of a particular particle in Bemba, which he calls a VP-focus particle. He notes the relevance of the notions *new* or *old information* for the understanding

of the distribution of this particle:¹⁶

"...negative sentences are used in the context where the corresponding affirmative has been mentioned before or, alternatively, when the speaker assumes that the hearer tends to believe in the truth of the corresponding affirmative. While this is not, per se, a totally *presuppositional* context, it nevertheless involves a context where the verb, at the very least, could *not* be new information to the hearer."

Givon thus notes that with negative sentences in Bemba the VP focus particle *-ali-* is not used, but instead another particle is used, namely *-a-* which he refers to as the COMP focus particle. Compare, for example, the following sentences taken from Givon:¹⁷

27. *ba-āli-boombele saana*
 'They-(VP focus)-worked hard'
 'They worked hard'
28. *ta-ba-ā-boombele saana*
 'Not-they-(COMP focus)-worked hard'
 'They didn't work hard'

Givon consequently sets out the following formulation to account for the distribution of these two particles:¹⁸

Verb not new information = COMP focus
 Verb new information = VP focus

He goes on to state that the above information,¹⁹

"...makes it easier to understand why the VP-focus particle may not be used in any negative sentence in Bemba if its function is indeed to appear in contexts where the verb is

new information. This formulation also permits a unified view of other restrictions on the distribution of this particle, namely that it may not appear in relative clauses, WH questions, cleft and pseudo-cleft constructions as well as in relative-related and largely presuppositional adverbial clauses such as *when, because, since, although, if, in spite of*, etc. Thus, while the negative obviously could not presuppose its corresponding affirmative, the fact that it appears in contexts where the affirmative is assumed to be known to the hearer or considered likely by him, removes the verb in the negative from the scope of strictly new information, and thus imposes on the negative in Bemba the very same scope restrictions imposed upon truly presuppositional clauses."

These observations could very well explain the reason why the negative agreement marker -ka- of class 1 sg. is related to the marker a- which is found in presuppositional clauses, and not to u- which occurs in positive main sentences. The reasons underlying the manifestation of the consonant k in the negative are not directly pertinent to the problem at hand and would involve considerations that are not germane to my study. For this reason it is not necessary here to explore the matter any further, and I simply assume that -ka- and a- are merely allomorphs.

With regard to (ii), I believe two possible views may be offered to account for the form a-.

Firstly, the view may be adopted that the potential form of the verb is an exceptional form, but this weakens the generalization already made on the distribution of the two markers under consideration. Secondly, it may be assumed that the potential form has in its underlying representation a more complex structure than is evident on the surface. In other words, it is here suggested that

the potential form functions as a subordinate verb in its underlying representation. This is not difficult to understand from a semantic point of view since a verb in the potential signifies, *inter alia*, the granting of permission for an action to be carried out by the subject of the verb. Logically, the granting of such permission must have its origin in some other agent. What is proposed here is that in a sentence such as 25.1, there is some reference to an agent which is not overtly marked in the surface form. Thus, I believe that 25.1 would have an underlying representation which would possibly include the following elements:²⁰

- (i) An agent responsible for the granting of permission
- (ii) A main predicate (e.g. *-thi* 'say' etc.)
- (iii) A potential clause

Now let us turn to RCs. In the light of the discussion thus far, one would expect the information presented in RCs to be more representative of morphological and syntactic *conservatism* than would be the case with main sentences. Thus, the form a- which is the more conservative one, would be expected to occur in RCs. This is illustrated in sentences 29 and 30 below.

29. *Inja [umfana ayithengile] ifile*
 'Dog [boy SpecM-SAM(a)-it-bought] it-died'
 'The dog which the boy bought has died'
30. *Indoda [uthisha akhuluma nayo] ngudokotela*
 'Man [teacher SpecM-SAM(a)-talks with-him] (is)-
 doctor'
 The man with whom the teacher is talking is a doctor'

31. *Unesi [osebenza lapha] muhle*
 'Nurse [SpecM-SAM(u)-works here] (is)-beautiful'
 'The nurse who works here is beautiful'
32. *Umakhi [owakha indlu yethu] uyagula namhlanje*
 'Builder [SpecM-SAM(u)-builds house of-us] he-is-
 ill today'
 'The builder who is building our house is ill today'
33. *Umntwana [ongaphuzi ubisi] yindodana yami*
 'Child [SpecM-SAM(u)-not-drink milk] (is)-son of-me'
 'The child who is not drinking milk is my son'

The question which emerges here is: Why does the agreement marker *-u*, which is generally associated with positive sentences (i.e. an innovative environment), also occur in certain RCs of the type illustrated in 31, 32 and 33 (a supposedly non-innovative environment).

I believe that a possible explanation for this discrepancy may be provided, in terms of certain views that have been expressed by Givon concerning word-order in Biblical Hebrew. Before presenting his views, one important observation need be made concerning sentences 29-33 above. This concerns the relationship that exists between the ANT and the relative predicate in the RC. Note that in sentences 29 and 30, where the SAM *a-* occurs, the ANT functions as the implied *direct* or *oblique* object of the relative predicate respectively. In sentences 31, 32 and 33, on the other hand, i.e. where the SAM *u-* occurs, the ANT functions in each case as the implied *subject* of the relative predicate. The problem at hand is thus narrowed down to those instances where the ANT functions as the implied *subject* of the relative predicate.

We may now consider Givon's observations on word-order

in Biblical Hebrew. He states,²¹

"...the more conservative VS word-order in Biblical Hebrew survives longer in clauses—such as relative clauses, focus sentences, WH-questions, object topicalization, etc.—in which the topicality of the object is enhanced relative to the downgraded topicality of the subject. While it is true that all these constructions are also more presuppositional than the neutral pattern, in principle it is also true that *if the topicality of the object is not involved, then in Biblical Hebrew a more presupposed construction will tend to be more progressive diachronically*, that is, exhibit more SV syntax. (Italics---GP)

He goes on to say,²²

"The general principle involved here is roughly this:

(42) *All other things being equal, if a sentence type is more presuppositional, then the subject of that sentence tends to be more presupposed ("more topical")."*

He concludes by saying,²³

"While a "structural" principle may seem like a tempting candidate for controlling the overall phenomenon of syntactic conservatism, it is not that principle per se that is involved, but rather more detailed, highly specific and above all more *explanatory* discourse-pragmatic considerations."

Turning to the Zulu sentences 29-33, we may once again note that in 29 and 30 the ANT functions as the implied object; let us assume here that this could be interpreted as meaning that the topicality of *an object* in these

sentences is enhanced. In 31, 32 and 33 on the other hand, the ANT functions as the implied *subject*; in these cases we may assume that the topicality of the object is not involved at all. With Givon's views in mind, it is now interesting to note that when the topicality of the object is enhanced, as is the case in 29 and 30, *the more conservative form a-* occurs. On the other hand, where the topicality of the object is not involved, as is the case of 31, 32 and 33, *then the less conservative form u-* is used.

An interesting point that deserves mention here is that in 29 and 30 above, where the ANT functions as the implied *direct object* and *oblique object* respectively, Strategy 1 is employed in the formation of the RCs. Consider now sentences 34 and 35 below where Strategy 2 is employed, and where the ANT is a noun of class 1 sg. In 34 the ANT functions as the implied *direct object* of the relative predicate and in 35, as the *oblique object*.

34. *Umfana [onja imlumile] uyakhala*
 'Boy [SpecM-SAM(a)-dog it-him-bit] he-is-crying'
 'The boy whom the dog bit is crying'
35. *Umakhi [omfowethu usebenza naye] uhambile*
 'Builder [SpecM-SAM(u)-my-brother he-works with-him]
 he-left'
 'The builder with whom my brother works has left'

As illustrated in these sentences when Strategy 2 is employed the form *u-* and not *a-* is used. This would imply in effect that in terms of the views expressed by Givon, the topicality of the object is *not enhanced* in these cases (i.e. when Strategy 2 is used). In fact what appears to be happening here, and this confirms the views

expressed in 2.1.3, is that the ANT has taken on the function of 'subject' (or 'theme') of the whole RC. In this respect its relationship with the RC is identical to that of an ANT in a subject RC, e.g.

36. *Umfana [osebenzayo] uyakwazi*
 'Boy [SpecM-SAM(u)-works] he-you-knows'
 'The boy who is working knows you'

To summarize then: the occurrence of two forms for the class 1 SAM, namely u- and a-, has nothing to do with NP movement in relativization but rather with the fact that a- represents the more conservative SAM for this class, and u- the more innovative one. Hence, in all presuppositional marked constructions, including RCs, a- is the marker that would be expected to occur. The occurrence of u- in certain RCs can be directly related to the pragmatics of topicality.

5.2 Aspects of the relative clause pronoun

5.2.1 Introduction

In 2.1.1 it was noted that Downing in his typological study, recognizes three 'semantic' universal properties of RCs. The first one listed concerns the property of *coreferentiality*. In terms of this property, a nominal within an RC *refers to the same entity* as a nominal outside of the clause. This phenomenon may be illustrated in Zulu, by considering the sentence below. In this sentence the ANT *abantwana*, and the pronoun bo in *nabo* are coreferential.

37. *Abantwana [uthisha adlala nabo] bayahleka*
 'Children [the-teacher-CRP-plays-with-them] they-
 laugh'
 'The children with whom the teacher is playing are
 laughing'

It may be noted that in this sentence the children with whom the teacher is playing are the *very same ones* that are laughing.

Coreferentiality is recognized as a category of *anaphoric relationships*.²⁴ This latter term is characterized by Wasow as follows:²⁵

"The native speaker of any natural language knows that special relationships, called *anaphoric relationships*, exist between certain pairs of elements in the language. When two items A and B in a given discourse are anaphorically related, the full specification of the meaning of B involves (i) referring to the fact that A and B are anaphorically related, and (ii) repeating some part of the meaning of A.

He goes on to say,²⁶

"Intuitively, it is clear why languages have anaphoric relations: anaphora reduces redundancy, thereby shortening (and hence simplifying) sentences. In order for this simplification to be possible, however, it is necessary that the speaker of a language be able to identify correctly the elements participating in an anaphoric relation and to determine correctly the meaning of the anaphor on the basis of meaning of the antecedent."

It is interesting to note that in each of the above sentences, the absolute pronoun occurs in the position where

it would be expected to occur in a simple declarative sentence.

Thus, for example, the associative adverb *nabo* in 37, which functions as the oblique object of the relative predicate, would occur in exactly the same position in a simple declarative sentence, thus:

38. *Umfowethu usebenza nabo*
 'My-brother he-works with-them'
 'My brother works with them'

The above observation supports the typological generalization made by Downing in this regard, namely:²⁷

"[The anaphoric pronoun---GP] is positioned where such a pronoun would appear in a simple declarative sentence, i.e., there is no movement assignable to relativization."

Givon, in his general characterization of the structure of RCs, expresses similar views to those expressed by Downing above concerning the position of the anaphoric pronoun. He refers to the phenomenon whereby an anaphoric pronoun is used in an RC to refer to an ANT, as the *Anaphoric Pronoun Strategy*; and then characterizes this strategy as follows:²⁸

"...the replacement of the coreferent NP within the restricting clause with the anaphoric pronoun marked for the appropriate case, and often at the same syntactic position as the deleted NP." [Italics---GP]

In the discussion which follows I explore various aspects of this 'anaphoric pronoun' in Zulu RCs.

5.2.2 The form and syntactic position of the RC pronoun

Consider the sentences below. In each of these sentences, an anaphoric pronoun occurs *in the form of an absolute pronoun*, which agrees in class with the ANT. Both the ANT and the anaphoric pronoun are underlined in each case:

39. Abakhi [umfowethu asebenza nabo] bakhathele
 'Builders [my-brother CRP-works with-them] they-(are)-tired'
 'The builders with whom my brother works are tired'
40. Umese [umntwana adla ngawo] ubuthuntu
 'Knife [child CRP-eats with-it] it-(is)-blunt'
 'The knife with which the child is eating is blunt'
41. Inkosikazi [udadewethu ahleka njengayo] ngunesi
 'Woman [my-sister CRP-laughs like-her] she-(is)-nurse'
 'The woman like whom my sister laughs is a nurse'

Let us now consider a few more sentences:

42. Ilabhulali [umfowethu aya kulo] likhulu
 'Library [my-brother CRP-goes to-it] it-(is)-big'
 'The library to which my brother is going is big'
43. Ngiyayazi inkosikazi [abakhuluma ngayo]
 'I-her-know woman CRP-talk about-her '
 'I know the woman about whom they are talking'
44. Iswidi [umntwana alifunayo] lisetafuleni
 'Sweet [child CRP-it-wants-RS] it-(is)-on-table'
 'The sweet that the child wants is on the table'

45. *Isitshudeni [esikusize izolo] ngumngane wami*
 'Student [CRP-you-helped yesterday] (is)-friend of me'
 'The student who helped you yesterday is my friend'
46. *Izinsizwa [ubaba azinike incwadi] zisebenza kulelibhilidi*
 'Young men [my-father CRP-them-gave letter] they-work in-this-building'
 'The young men to whom my father gave the letter work in this building'

With respect to the observations made thus far concerning the form and syntactic position of the anaphoric pronoun, sentences 42 and 43 do not appear to present any problem. The pronouns in these two sentences are *-lo* and *-yo* respectively and both appear in the oblique object position.

A problem does, however, arise in each of sentences 44, 45 and 46 where no *overtly marked* absolute pronoun occurs in the RC. Instead an *agreement marker* is used in each case to refer to the ANT; this class agreement with the ANT is achieved in 44 by the OAM *-li-*, in 45 by the SAM *si-* and in 46 by the OAM *-zi-*. The question that arises here is: Why should sentences 44, 45 and 46 differ in this respect from all the other sentences discussed thus far?

The answer relates to the covert function of the ANT in the RC. If sentences 39 to 43 are reconsidered with specific reference to the relationship that holds between the ANT and the relative predicate, it will be noted that in each case this ANT 'covertly' functions as the oblique object of the relative predicate.

This relationship is in actual fact overtly marked in the

RC by the element that co-refers with the ANT, namely the *anaphoric pronoun*; thus, for example, in sentence 39, here repeated as 47, the anaphoric pronoun *-bo* in *nabo* represents the oblique object of the relative predicate *asebenza*. This relationship in turn reflects the relationship that exists between the ANT *abakhi* and the relative predicate.

47. *Abakhi [umfowethu asebenza nabo] bakhathele*
 'Builders [my-brother CRP-works with-them] they-(are)-tired'
 'The builders with whom my brother works are tired'

Turning now to sentences 44, 45 and 46 it may be observed that the ANT in each of these cases performs a different function with respect to the relative predicate. In 44 the ANT functions as the direct object of the relative predicate and this relationship is reflected by the occurrence of the OAM *-li-* in the relative predicate. In 45 the ANT functions as the subject of the relative predicate; this relationship is reflected by the occurrence of the SAM *si-* in the relative predicate. Finally, in sentence 46 the ANT functions as the *indirect object* of the relative predicate and once again the OAM is used, in this case *-zi-*, to reflect this relationship.

As was the case noted with the occurrence of the absolute pronoun in RCs, the SAM and OAM occur in the positions where they would be expected to occur in simple declarative sentences. Note, for example, the following simple declarative sentences which correspond to the RCs of 44, 45 and 46 respectively:

48. *Umntwana uyalifuna*
 'Child he-it-wants'
 'The child wants it' (where an object such as *iswidi*
 is implied)
49. *Isitshudeni sikusize izolo*
 'Student he-you-helped yesterday'
 'The student helped you yesterday'
50. *Ubaba uzinike incwadi*
 'My-father he-them-gave letter' (where an object such
 as *izinsizwa* is implied)
 'My father gave them a letter'

In the light of the observations made thus far, it may be stated then that the RC in Zulu contains an *anaphoric pronoun*, except when the ANT functions either as subject, direct object or indirect object of the RC. In these latter three cases the RCs contain *agreement markers* instead. A question that could arise here is: Why should such a dichotomous situation exist? In other words, why should *anaphoric pronouns* occur in some RCs and *agreement markers* in others?

Perhaps a more relevant question would be: How do agreement markers differ in function from absolute pronouns?

In this respect Givon has made certain interesting claims, which I believe can throw much light on the issue at hand. One such claim, for example, is that according to him a distinction cannot be drawn between the processes of agreement and pronominalization. He states,²⁹

"...they are fundamentally one and the same phenomenon, and that neither diachronically nor, most often, synchronically could one draw a demarcating line on principled grounds."

With specific reference to grammatical agreement Givon says,³⁰

"There is a certain tradition in linguistics of viewing grammatical agreement of various nominal arguments with the verb as a redundant, predictable, automatic feature of language and therefore one lacking in functional load. A detailed study of both subject and object agreement in language will show that this view is both unjustified and unfortunate."

Givon shows that grammatical agreement is fundamentally a topic related phenomenon, arising from anaphoric pronominalization in topical discourse contexts. He demonstrates that the likelihood of verb agreement is governed by the *hierarchy of topicality*, i.e. the likelihood of various NP arguments being the topic of sentences, and more particularly the *topic* in *topic shift* constructions. He recognizes one universal restriction on topic shift (TS) and that is that the topic constituent may be either *definite* or *generic* but never referential-indefinite. He then continues,³¹

"Seeing that in "subject-prominent" languages the subject NP holds most of the topic functions, it is of course not altogether an accident that subjects are highest of all case-arguments on the topicality hierarchy. And thus it is not an accident that they are the first and most frequent of all cases to develop grammatical agreement. The process by which this is done may be called de-marking: A subject topic-shift construction is over-used in a weaker context. Speakers eventually recognize the context as being much too weak to justify a marked status for the TS construction. Thus they re-analyze it as the neutral syntax. The erstwhile topic-subject gets re-analyzed as "mere" subject, while the *topic-agreement anaphoric pronoun* gets re-analyzed as subject agreement:

9 TS ("MARKED") NEUTRAL (RE-ANALYZED)
 The man, he came The man he-came
 TOP PRO SUBJ AG"
 [Italics---GP]

The morphological binding of the pronoun to the verb is an inevitable natural phenomenon, "cliticization, having to do with the unstressed status of pronouns, their decreased information load and the subsequent loss of resistance to phonological attrition."³² With regard to objects, Givon explains that the development of object agreement follows roughly the same process as that noted with subject agreement, involving the demarking of an over-used topic-shift construction.³³

A further interesting point made by Givon is that if one accepts the diachronic explanation that the rise of agreement is a predictable offshoot of the pronominal reference system of language, then it "would be unlikely that such a universal, well motivated process would fail to exhibit some rather specific functional properties."³⁴ In this regard he states,³⁵

"In synchronic terms, when erstwhile pronouns get re-analyzed as agreement morphemes, *they most commonly continue to perform their anaphoric function.* Thus, it is well known that languages with a viable paradigm of subject-verb agreement may anaphorically delete the subject NP without replacing it with an independent pronoun." [Italics---GP]

This latter viewpoint is attested, for example, in Zulu. Compare in this respect the following two sentences:

51. *Umfana uyadlala*
 'Boy he-is-playing'
 'The boy is playing'

52. [∅] *uyadlala*
 '[∅] he-is-playing' (∅ indicates the deletion of the subject NP)
 'He is playing'

Givon also observes that an object agreement marker is used in certain languages, as a *definitizer*. This function, according to him, should be considered a natural extension of the 'anaphoric-pronominal function'. Since both definite nouns and pronouns are topics, i.e. they appear in contexts where the referent is presupposed to be known to the hearer, this type of extension is to be predicted.

Applying Givon's arguments to the RC situation in Zulu, it may be concluded that the dichotomous situation earlier referred to is in fact not dichotomous at all.

Since, in the light of Givon's views, there is no demarcating line between the processes of agreement and pronominalization, the general statement may now be made that in all the RCs exemplified thus far, an anaphoric pronoun is in the form of either an *absolute pronoun* or an *agreement marker*.

A problem, however, immediately arises with such a viewpoint. This concerns the employment of Strategy 2 in the formation of RCs. Consider, for example, the following sentence:

53. *Indoda [emntwana wayo uyagula] izobuya*
 'Man [SpecM-SAM(i)-child of-him he-is-ill] he-will return'
 'The man whose child is ill will return'

In this sentence, there are two elements in the RC that refer to the ANT *indoda*, namely the agreement marker *i-* that is affixed to the initial noun and the pronoun *-yo* of *wayo*. If the view is adopted that both agreement markers and absolute pronouns function as anaphoric pronouns, then it would mean that in the RC of 53, two anaphoric pronouns occur which co-refer with the ANT. A possible explanation for the discrepancy that arises here could be provided, I believe, if one takes into consideration the contents of the concluding paragraph of Chapter 3 on page 124. There it was stated that the agreement marker which is affixed to the initial noun may be regarded as a *thematic agreement marker*. In terms of this viewpoint the function of such an agreement marker would be that of bringing *a whole RC* into a specific relationship with its theme. If this view is adopted, then the agreement marker *i-* of sentence 53, is not an anaphoric pronoun in the sense that it refers to the referent of the ANT, but rather a formative whose function it is to relate a whole clause to its theme. In the light of these observations then, *-yo* would function as the only true anaphoric pronoun in 53.

5.2.3 The 'weak pronominal form' of the anaphoric pronoun

Downing, in his typological study, makes the generalization that the anaphoric pronoun in an RC "has a nondistinctive weak pronominal form."³⁶ In these paragraphs, I investigate the validity of this statement with respect to Zulu RCs. Consider first the following simple declarative sentences. In each case an anaphoric pronoun occurs which agrees in class with an ANT that has already been mentioned in prior discourse. The implied ANT is indicated within parentheses before each sentence, and the anaphoric pronoun is

underlined in each case.

54. (*Ilabhulali*) - *Umfowethu usebenza kulo*
 '(The library) - My-brother he-works in-it'
 '(The library) - My brother works in it'
- 55.1 (*Iswidi*) -
 '(Sweet) - Child he-it-wants'
 '(The sweet) - The child wants it'
- 55.2 (*Iswidi*) - *Umntwana ufuna lona*
 '(Sweet) - Child he-wants it'
 '(The sweet) - The child wants it'
- 56.1 (*Umninisitolo*) - *Ngimbhalele*
 '(Shopowner) - I-him-wrote-to'
 '(The shopowner) - I wrote to him'
- 56.2 (*Umninisitolo*) - *Ngibhalele yena*
 '(Shopowner) -I-wrote-to him'
 '(The shopowner) - I wrote to him'

In sentence 54, the anaphoric pronoun functions as the *oblique object* of the verb; in 55.1 and 55.2, as the *direct object*; and finally in 56.1 and 56.2, as the *in-direct object*.

When it functions as the oblique object the anaphoric pronoun is in the form of an *absolute pronoun* as is evident, for example, in sentence 54. When it functions as a direct or indirect object, then it may be in the form of *either an agreement marker*, as is evident in 55.1 and 56.1 or an *absolute pronoun* as is evident in 55.2 and 56.2.

The use of absolute pronouns in sentences 55.2 and 56.2 has the effect of producing *emphatic* sentences, in contrast with 55.1 and 56.1 where the sole occurrence of

agreement markers produces *unemphatic* or *unstressed* sentences. With respect to the occurrence of absolute pronouns, Cole states,³⁷

"Absolute pronouns are primarily emphatic in significance and are often used for purposes of contrast."

Interestingly though, wherever an absolute pronoun is inflected by the addition of various prefixal elements, as in the formation of, inter alia, possessives and adverbs, it *loses* its emphatic significance. Thus, no emphasis is conveyed in sentence 54 above, where the absolute pronoun functions as an adverb base.

Let us now turn to RC sentences. Consider each of the following sentences that contain RCs which correspond in form to the simple declarative sentences above.

57. *Ilabhulali* [*umfowethu asebenza kulo*] *likude*
 'Library [my brother CRP-works in-it] it-(is)-far-away'
 'The library in which my brother works is far away'
- 58.1 *Iswidi* [*umntwana alifunayo*] *lisetafuleni*
 'Sweet [child CRP-it-wants-RS] it-(is)-on-table'
 'The sweet which the child wants is on the table'
- 58.2 ?*Iswidi* [*umntwana afuna lona*] *lisetafuleni*³⁸
 'Sweet [child CRP-wants it] it-(is)-on-table'
 'The sweet which the child wants is on the table'
- 59.1 *Umninisitolo* [*engimbhalele*] *ngumnqane kababa*
 'Shopowner [CRP-him-wrote to] (is)-friend of-my-father'
 'The shopowner I wrote to is a friend of my father'

- 59.2 ?*Umninisitolo* [*engibhalele yena*] *ngumngane kababa*
 'Shopowner [CRP-wrote to him] (is)-friend-of-my-father'
 'The shopowner I wrote to is a friend of my father'

An interesting problem emerges from the above examples, namely that sentences 58.2 and 59.2, are considered 'deviant' or 'ill-formed'.

Now it is noted that sentences 58.2 and 59.2 differ from 58.1 and 59.1 respectively, in one respect only, namely that an absolute pronoun is used in each case *instead* of an agreement marker. It would be correct then to assume that it is this one difference that is responsible for the 'deviant' or 'ill-formed' nature of the two sentences concerned.

Interestingly, the absolute pronoun as used in each of these sentences is, as already noted, emphatic in significance. 'Resistance' to its occurrence in these RCs therefore appears to support Downing's generalization that the *anaphoric pronoun* has a 'weak pronominal form' in RCs.

The various points raised in this section concerning the *anaphoric pronoun* of Zulu RCs may now be summarized as follows:

- (i) Every RC in Zulu contains an anaphoric pronoun. The latter may either be in the form of an absolute pronoun or an agreement marker.
- (ii) The anaphoric pronoun occurs in the position where it would be expected to occur in a simple declarative sentence. In other words, there is no movement evident in relativization.
- (iii) The anaphoric pronoun has a weak pronominal form, i.e. it is unstressed.

CHAPTER 6Temporal and Locational Relative ClausesSynopsis

In this chapter, it is argued that in addition to Nominal RCs, two other RC types occur in Zulu, namely Temporal and Locational RCs. What are referred to here as Temporal RCs were traditionally called 'participial clauses', while Locational RCs were traditionally referred to as 'descriptive clauses of place'. The characteristic properties of these two RC types are outlined, and certain differences which exist between the nature of these clauses and Nominal RCs are explored. Finally, in the light of the discussion presented in this chapter, it is shown that the identification of three different types of RCs in Zulu reflects to a certain extent certain ontological claims that have been put forward in the literature, concerning the way in which the universe is perceived by the human mind.

6.1 Introduction

In this chapter, an investigation is undertaken of the two clause types which appear within square brackets in sentences 1 and 2 below:

1. *Ngizobabona [nxa befika]*
 'I-will-them-see [when they-arrive]'
 'I will see them when they arrive'
2. *Indawo [lapho abafana behlala khona] ikude*
 'Place [where boys they-live there] it-(is)-far'
 'The place where the boys live is far'

Traditionally, the clause illustrated in 1 has been called a 'participial clause', and that in 2, a 'descriptive clause of place'. It is my intention to argue here that these two types of clauses are in fact RCs. Each type is dealt with separately below.

6.2 A reexamination of the so-called 'participial clauses'

I should like to begin this investigation by reviewing certain significant observations that have been made by traditional grammarians concerning the distribution of these clauses. Their observations in this regard were made primarily in terms of the core of these clauses, namely the verb. According to these grammarians, this verb occurred in what they referred to as the 'participial mood/sub-mood/form'.² The main uses of this 'participial' verb, as observed by them, may be summed up as follows:

- (i) it occurs after certain conjunctives, inter alia, the following:³

lapho, lapha, la 'when'
nxaxa, nxashana 'when'
uma 'when, if'
mhla, mhlazana 'on the day when'
lokhu, selokhu 'ever since'
msuku 'on the day when'
kade 'a little while ago'

Consider now the sentences below which illustrate the use of two of these conjunctives:

3. [*Uma befika kusasa*] *batshele ukuthi ngifuna ukubabona*
 '[If they-arrive tomorrow] them-tell that I-want to-them-see'
 'If they arrive tomorrow, tell them that I want to see them'
4. *Umama uzosisiza isitshudeni [lapho esibona]*
 'My-mother she-will-him-help student [when she-him-sees]'
 'My mother will help the student when she sees him'

(ii) It expresses an action which is concurrent with the one expressed by the main verb. In this respect, consider the following examples.

5. *Uzohamba [ekhala]*
 'He-will-go [he-cry]'
 'He will go crying'
6. *Abafana bacula [begijima]*
 'Boys they-sing [they-run]'
 'The boys sing while they run'

(iii) It occurs after certain auxiliary verbs, inter alia, the following:⁴

- damene*, -*dane*, -*de* 'be in the habit of doing'
- hambe* 'do all the time'
- hleze* 'do from time to time'
- lokhu* 'keep on doing'
- singe* 'do habitually'
- be* 'be doing (indicating continuous action)'

Examples of the use of two of these verbs in sentences are given below:

7. *Lomseshi ulokhu [engicela imali]*
 'This-detective he-keeps-on [he-me-asks-for money]'
 'This detective keeps on asking me for money'
8. *Isishosha sihleze [siya ebhikawozi]*
 'Cripple he-from-time-to-time [he-goes to-bakery]'
 'The cripple goes to the bakery from time to time'

'Participial clauses', as exemplified above, have been classified under different headings in the grammars of various languages. In English, for example, a clause such as '...when he arrives' (cf. sentence 4) is commonly called an 'adverbial clause of time' whereas the word *crying* in a sentence such as 5 above is called a 'participle'.⁵

It will be interesting here to explore the significances of these so-called 'adverbial clause of time' and 'participles' in English, since such an exercise could, I believe, throw more light on the significance(s) of the

corresponding construction in Zulu. Let us first consider the following English sentence.

9. I saw the man *walking* towards the station

As noted, a word such as *walking* in this sentence is referred to as a 'participle'. With respect to this construction Dinneen says,⁶

"The participle is a word type that shares the properties of verb and noun. It has the same simultaneous features as the noun and verb, except for person and mood."

This definition is of interest, since it takes cognizance of both *verbal* and *nominal* characteristics of the construction underlined in 9. If one takes a closer look at this sentence it will be noted that at least two different interpretations may be assigned to it. These are as follows:

10. I saw the man *while/when he was walking towards the station*

11. I saw the man *who is walking towards the station*

What is of significance here is that in the interpretation expressed in sentence 10, the italicized clause is what was earlier referred to in Zulu as a 'participial clause' while that in 11 is an RC.

Thus a 'participle' as used in a sentence such as 9, has two interpretations and in one of these interpretations an RC occurs. The question arises as to whether the other may be assigned RC status as well. If this were to be so, then the clause in question would have to, in terms of

the semantic definition of an RC (as set out in 2.2.1),
restrict some referent.

Certainly, from a semantic point of view *while he was walking towards the station* in 10 does not restrict the domain of reference of *the man* as is the case in 11. The information that it conveys is that the speaker saw the man *at the time that* he (i.e. the man) was walking towards the station. It therefore appears to indicate a specific time when the action of the verb in the main clause was carried out. In semantic terms then, the clause *while he was walking towards the station* could be construed as one which *restricts the continuum of time* to a specific moment, which is concurrent in a temporal sense, with the action expressed by the main verb. Evidence in support of this view is illustrated in the following example where the inclusion of an ANT that is indicative of time does not alter the semantic interpretation of 11.

12. I saw the man at the time *when he was walking towards the station*

Note that the replacement of the ANT in 12 by an ANT which is not indicative of time would yield an unacceptable sentence.

13. *I saw the man at the place when he was walking towards the station

It should be noted that in sentence 12 *a whole adverbial phrase of time*, namely *at the time* appears to function as the ANT, and not only the *noun* referring to *time*. Compare in this regard the following ungrammatical sentence with sentence 12.

14. *I saw the man the time while/when he was walking towards the station

One possible test of determining whether the ANT in 10 is in fact temporal in nature and not, let us say, *the man*, would be to positively restrict the referent of the ANT before introducing the clause *while/when he was walking towards the station*. Consider, for example, the following sentence where a proper name is used in place of *the man*.

15. I saw John walking towards the station

Interestingly enough this sentence does not have the interpretation expressed in 11. The interpretation conveyed in 10, however, is acceptable.

16. *I saw John who is walking towards the station⁷

17. I saw John while/when he was walking towards the station

The interpretation conveyed in 11 where an RC is used, is obviously redundant here since a proper name is a one member set; it refers to a specific individual. Further restriction of the domain of reference of this set is not possible and hence the clause *walking towards the station* cannot be a statement about *John* - instead it indicates an action which is concurrent with that of seeing; in other words, it indicates an action which is carried out *at the same time* as that of the main verb.

Thus, in the light of the above observations, it is maintained here that underlying a sentence such as 15, is one which incorporates an ANT that is indicative of time; more specifically an adverbial phrase of time. In this regard

consider, for example, sentence 18 below which is similar in meaning to that of 17.

18. I saw John at the time while/when he was walking towards the station

Let us now return to sentence 9, which is repeated here as 19.

19. I saw the man *walking* towards the station

The two interpretations of this sentence which concern us here are:

20. I saw the man at the time while/when he was walking towards the station

21. I saw the man who is walking towards the station

If it is assumed that sentence 20 represents the *underlying sentence* of 19, then the view may be expressed that 19 is formed from 20 as a result of the application of deletion rules. These rules would have the effect of deleting the phrase *at the time* as well as *while/when he was*.

Similarly, deletion rules would apply to 21 in order to produce 19. In this case the words *who is* would be deleted.

Now consider the following sentence which contains a noun and a participle in adjacent positions.

22. The man *eating* the porridge is a teacher

With this sentence only an interpretation involving an RC

is allowed. In this regard, consider the following:

23. The man *who is eating* the porridge is a teacher

24. *The man while/when he eats the porridge is a teacher

I believe that the reasons why the interpretation involving a temporal ANT is not conveyed in this sentence are twofold:

- (i) The occurrence of an adverbial phrase of time in a position immediately after the subject noun in an English sentence is usually disallowed.
- (ii) Semantic oddity is involved since the incorporation of an ANT indicative of time in the above sentence would imply that the man spoken about is a teacher only while/when he eats porridge.

The discussion on the nature of English participles above has shown that participles have a restrictive force with respect to: (i) the referent of the antecedent noun, and (ii) the temporal relationship that exists between the action expressed by the participle and that expressed by the main verb. In some cases both kinds of restriction apply; in others, however, only the one is evident.

These considerations reveal, that as far as English is concerned, a close relationship exists, both semantically and syntactically, between RCs, participles and adverbial clauses of time; as noted the latter two represent parallel forms of the Zulu 'participial clause'.

Similar facts are borne out in a language such as German. Consider in this regard, for example, Keenan and Comrie's observations below:⁸

"Note further that our semantically based notion of RC justifies considering as RCs certain constructions that would perhaps not have been so considered in traditional grammar. Thus, in German, alongside the traditional RC in (1) we also count the participial construction in (2):

- (1) der Mann, der in seinem Büro arbeitet
 the man who in his study works
 'the man who is working in his study'
- (2) der in seinem Büro arbeitende Mann
 the in his study working man
 'the man who is working in his study'."

Let us now turn to Zulu and consider first the following sentence.

25. *Uzobabona [befunda]*
 'You-will-them-see [they-study]'
 'You will see them studying'

By analogy to the discussion presented above concerning English participles, it may be stated that the underlined verb in 25 restricts the continuum of time to a moment when the person addressed will see the people who are being talked about. Thus an underlying ANT in the form of an adverbial phrase of time is postulated for the verb *befunda*. In this regard note, for example, that the inclusion of an overtly marked ANT such as *ngesikhathi* 'at the time' in 25 above, does not alter the basic significance of this sentence. Compare now sentence 26 with that of 27 where *endaweni* is introduced as the ANT.

26. *Uzobabona ngesikhathi [befunda]*
 'You-will-them-see at-the-time [they-study]'
 'You will see them (at the time) when they study'
27. **Uzobabona endaweni [befunda]*

Thus it may be said that the underlined verb in 25 behaves in the same manner as RCs, in the sense that it serves to restrict or specify the referent of the ANT, in this case an ANT which has temporal connotations.

Now in Chapters 3, 4 and 5 an outline of the characteristic properties of Nominal RCs was presented. If the assumption is made that the properties noted in those chapters are characteristic of all RCs in Zulu, then a serious problem arises with regard to sentence 25, since the participial clause in this sentence does not incorporate these properties. I refer here specifically to the following:

- (i) *The absence of an overtly marked anaphoric pronoun*
- (ii) *The absence of the specifier marker a-*
- (iii) *The absence of the relative suffix -yo*

Let us consider each of these points separately:

- (i) *The absence of an overtly marked anaphoric pronoun* - The absence of this pronoun to refer to the ANT suggests that the phenomenon of coreferentiality is not manifest in such clauses. It may be recalled here however that Downing, in his typological work observes with respect to the phenomenon of coreferentiality the following:⁹

"...a relative clause incorporates, as one of its terms, a nominal which is coreferential with a nominal outside of the clause. Neither nominal need be expressed overtly, although presumably one or the other must."

Thus the absence of an anaphoric pronoun in an RC

is not unusual. The question, however, that arises here is the following: Is there any reason why there should be no anaphoric pronoun in these so-called 'participial clauses', given the assumption that these clauses are in fact RCs? I believe that a consideration of simplex sentences could assist in unravelling the problem at hand. Let us consider the following two sentences.

28. *Isitshudeni sizokhuluma nomfana*
 'Student-he-will-speak with-boy'
 'The student will speak to the boy'
29. *Ngizofunda kusasa*
 'I-will-study-tomorrow'
 'I will study tomorrow'

Note that in 28 an associative adverb occurs after the verb. The base of the associative adverb is the noun *umfana*. In 29, on the other hand, an adverbial phrase of time, *kusasa* occurs after the verb. Now consider the context wherein the noun *umfana* of 28 occurs in sentence-initial position or has been referred to in previous discourse. The resultant sentence would take on the following form:

30. *(Umfana) isitshudeni sizokhuluma naye*
 '(Boy) student-he-will-speak with-him'
 'The student will speak to him (where *the boy* is implied)'

Note here the occurrence of an anaphoric pronoun *-ye* to refer to the noun *umfana* which occurs clause-initially or has been referred to in previous discourse. Now consider a context where the

adverbial phrase of time, *kusasa* occurs clause-initially or is mentioned in prior discourse.

31. *(Kusasa) ngizofunda*
 '(Tomorrow) I-will study
 'I will study (where *tomorrow* is implied)'

Note here that *no anaphoric pronoun* is used to refer back to *kusasa*. Thus with reference to the above two sentences, a situation exists in Zulu where an anaphoric pronoun is used to refer to a *noun* that has been previously mentioned but no anaphoric pronoun is used to refer to an *adverb of time* that has been previously mentioned. I believe that these considerations alone explain why an anaphoric pronoun occurs in Nominal RCs but not in the so-called 'participial clauses' under consideration in this section; since an anaphoric pronoun does not occur in a simplex sentence such as 31 above to refer back to an adverb of time, surely it would not be expected to occur in a clause to refer back to *an ANT which is an adverb of time*. Compare now the following two sentences, one where the ANT is a noun and the other where the ANT is an adverbial phrase of time.

32. *Umfana [isitshudeni esizokhuluma naye] uyakhala*
 'Boy [student he-will-speak with-him] he-is-crying'
 'The boy to whom the student will speak is crying'

33. *Uzombona ngesikhathi [efunda]*
 'You will-him-see-at-the-time [he studies]'
 'You will see him studying'

Thus it is maintained here that the absence of an anaphoric pronoun in participial clauses is not a peculiarity of these clauses alone but of the language in general.

- (ii) *The absence of the specifier marker a- - I believe that the absence of the specifier marker a- in so-called participial clauses relates to the fact that these clauses cannot be used as pronouns. This function, as noted in 3.4.2, is one of the two inherent functions of the formative a-. Consider, for example, the following ungrammatical sentence.*

34. **[Ecula] bekuyizolo*

An interesting problem however arises here. It was noted in Chapter 3 that a- has in addition to its pronominal function, the function of marking specificity. Now if 'participial clauses' are RCs of a particular type, and this is indeed what is being claimed here, then the question may be asked: What element in these clauses indicates specificity? Although an answer to this question will, I believe, require research beyond the scope of this thesis I should nevertheless like to mention the following relevant points. Firstly, I wish to indicate that by referring to a- as a specifier marker, does not imply that it is the only specifier marker in the language. Some Bantu languages, inter alia,

Shona, Venda and Swahili do not contain the specifier marker $\underline{\alpha}$ -, yet there are RCs as well as other specifiers in these languages. In this regard, an example of a Swahili sentence would suffice here. Consider the following sentence which was set out on page 82, and which is repeated here for the sake of convenience. (The position where $\underline{\alpha}$ - would be expected to occur is marked by the symbol \emptyset).

35. *Miti* [\emptyset *itakayoangushwa*] *itatumiwa hapa*
 'Trees [they-will-An Pro-be-felled] they-will-be-used here'
 'The trees that will be felled will be used here'

I believe that an explanation for the problem at hand can only be achieved if certain tonal phenomena are considered. It is noted with interest, for example, that the tones on the subject agreement markers of participial clauses in Zulu differ from the tones that occur on the corresponding subject agreement markers of principal clauses.¹⁰ In this regard consider, for example, the following quotation taken from Doke:¹¹

"Though the positive tenses of the participial mood closely resemble the corresponding tenses of the indicative mood in form, they are radically different in tone."

Consider also the following observations made by Fortune, with respect to aspects of tone in Shona participial clauses:¹²

"The subject concords of the participial for all persons are high, with the exception of the positive participial present simple indefinite, e.g. *ndicciuya* (I coming), where the subject concords are all low in tone. This difference in tone is the main difference between the positive indicative forms and the positive participial forms, other than the present simple indefinite.

e.g. Ndaūyā nhāsi (I came to-day)

Kana ndāūya nhasi (When I have come to-day)."

(In the above examples a high tone on a syllable is indicated by a horizontal bar; the absence of a tone-mark indicates the occurrence of a low tone).

With reference to *RCs*, Fortune makes the following interesting observations:¹³

"When *positive*, the relative predicate is identical in form with corresponding forms of the indicative and potential moods, save that it has its own patterns of intonation and, in particular, its subject concord is uniformly low in tone. When *negative*, the relative predicate is identical in form with corresponding forms of the participial mood, save that its subject concord is, again, uniformly low in tone. This tonal characteristic of the direct relative predicate, which accompanies the switch of a predicate from a purely predicative function to a qualificative one, provides the basis for the existence of a relative mood distinct from the indicative, potential, and participial moods from which it is nevertheless derived." [Underlining---GP]

In the light of these observations, I believe that the possibility of associating the function of specificity with a particular tone cannot be excluded, at least as far as Zulu participial clauses are con-

cerned. Clarification on this issue would, however, require further research.

- (iii) *The absence of the relative suffix -yo* - As noted in chapter 4 (cf. 4.2), the relative suffix *-yo* in Zulu has evolved via a process of *semantic bleaching* from anaphoric pronouns. It was shown in section 4.3.1 of the same chapter that in certain languages such as Shambala and Swahili, the suffix of the relative predicate agrees in class with the *noun that functions as the ANT*. Given the correctness of the assumption that the ANTs of 'participial clauses' are adverbial phrases of time, the absence of *-yo* in such clauses is understandable. This is because adverbial phrases of time are generally believed not to have nominal status. However, an interesting observation which was recorded by Doke and which was referred to in 1.4.6.1 raises a problem in this regard. I refer here to instances where *-yo* does in fact occur in participial clauses. Consider, for example, the following sentences.

36. *Sambona [mhla sifikayo]*
 'We-him-saw [on-day we-arrived-RS] '
 'We saw him on the day we arrived'
37. *Ngizokusiza [nxa umthunywa efikayo]*
 'I-will-you-help [when messenger he-arrives-RS] '
 'I will help you when the messenger arrives'

If the relative suffix is assumed to occur in RCs only, then its occurrence in 36 and 37 appears to confirm the belief *that participial clauses are RCs*.

A significant question, however, still remains unanswered, namely: Why does the relative suffix occur in the participial clauses of the above two sentences?

I should like to propose the following possible explanation for the problem raised here.

Since the relative suffix *-yo* appears to occur with a restricted number of conjunctives, I shall consider the possibility of identifying the conjunctives involved in such cases, as ANTs. This would imply of course that these conjunctives have nominal characteristics. Interestingly, conjunctives such as *mhla* and *nxa* are derived from nouns, namely *umuhla* 'the day, period of day' and *inxaxa* 'a portion, share, part', respectively.¹⁴ Thus *mhla* and *nxa* appear to have undergone a 'category shift' from nominals to conjunctives. The fact that they may co-occur with the relative suffix, however, implies that they still retain their nominal characteristics. (In this regard, note, for example, the retention of part of the class prefix in these two conjunctives, viz. *m-* in *mhla* and *n-* in *nxa*). It is significant to note, however, that *-yo* is not obligatorily used after these conjunctives. Consider, for example, the following sentences:

38. *Sizomsiza [mhla efika]*
 'Ve-will-him-help [on-day he arrives]'
 'Ve will help him on the day he arrives'
39. *Ngizombona [nxa ngibuya]*
 'I-will-him-see [when I-return]'
 'I will see him when I return'

These two sentences appear to illustrate not only a weakening but rather the actual 'disappearance' of the 'nominal influence' of the two conjunctives under consideration (even though a part of the class prefix is still retained in each case).

In the light of the above discussion, a reinterpretation of the boundaries of certain 'participial clauses' could be considered. Given the correctness of the assumption that *mhla* and *nxa* are the true ANTs of the 'participial clauses' in 36 and 37, they would, in a stringent linguistic analysis, be treated as part of the main clause, hence:

40. *Sambona mhla [sifikayo]*
 'We-him-saw on-day [we-arrived-RS]'
 'We saw him on the day we arrived'
41. *Ngizokusiza nxa [umthunywa efikayo]*
 'I-will-you-help when [messenger he-arrives-RS]'
 'I will help you when the messenger arrives'

However, as noted, their shift from one category to another, namely from *nominal* to *conjunctive* - where they have taken on the new function of 'clause connective' - has resulted in a 'weakening' or 'disappearance' of their nominal status and this fact alone justifies an analysis which treats each of them as a constituent part of the participial clause.

Concluding remarks - In this section, I have attempted to show that the traditionally called 'participial clauses' are in fact RCs of a particular type. Unlike Nominal RCs,

these clauses do not function as pronouns. Nevertheless, they have restrictive force in that they serve to restrict the dimension of time. For this reason the term *Temporal RCs* is here suggested as an appropriate label for these clauses.¹⁵

6.3 A reexamination of the so-called 'descriptive clauses of place'

In this section, an investigation is undertaken of clauses that have been traditionally called 'descriptive clauses of place'. An example of such a clause is given below:

42. *Ngithanda indlu [lapho abafana bedlala khona]*
 'I-like house [where boys they-play there]'
 'I like the house where the boys play'

I wish to show in this section that these clauses, like 'participial clauses', are in fact RCs. Such an analysis would of course entail that these clauses restrict the domain of reference of some ANT. The question that immediately arises here is: What is the nature of this ANT? Let us begin this investigation by comparing sentence 42 above with 43.

43. *Ngithanda indlu [abafana abadlala kuyo]*
 'I-like house [boys CRP-play in-it]'
 'I like the house in which the boys play'

In this sentence, a Nominal RC occurs which serves to restrict the domain of reference of the ANT *indlu*; it specifies, out of a whole set of houses, the particular one in which the boys play. Interestingly, my informant was

not able to draw a clear-cut distinction between the meaning of this sentence and that of 42. However, the clauses of these two sentences do not appear to be completely interchangeable. Consider, for example, the following two instances where, in the one case, a 'descriptive clause of place' is used, and in the other a Nominal RC.

44. *Abafana badlala phandle [lapho kushisa kakhulu khona]*
 'Boys they-play outside [where it-is-hot much there]'
 'The boys are playing outside where it is very hot'
- 45 **Abafana badlala phandle [okushisa kakhulu kukho]*

Note here that sentence 44, which contains a 'descriptive clause of place', is grammatical, whereas 45, which contains a Nominal RC, is ungrammatical. The fact that these two clauses are not interchangeable suggests that they do not convey the same meaning. Whatever the difference in meaning might be, it will be assumed here that it is *this difference* that accounts for the difference in the composition or 'make-up' of the two clauses.

Now consider the following two sentences which I believe can throw more light on the issue at hand:

46. *Ngithanda emva kwendlu [lapho abafana bedlala khona]*
 'I like of-house [where boys they-play there]'
 I like the back of the house where the boys play'
47. *Ngithanda emva kwendlu [abafana abadlala kuyo]*
 'I like back of-house [boys CRP-play in-it]'
 'I like the back of the house in which the boys play'

With reference to these two sentences it is interesting to note that the anaphoric pronoun *khona* occurs in 46 while

-yo occurs in 47. It has already been established that a clause such as the one illustrated in 47 is a Nominal RC. Here the anaphoric pronoun *-yo* shows agreement with the noun *indlu* and functions as the ANT. Now, let us assume that the clause in 46 is an RC. The question that arises is: What does this anaphoric pronoun *khona* refer to?

It is interesting to note that in a simple declarative sentence where the whole phrase *emva kwendlu* has been previously mentioned in discourse the anaphoric pronoun *khona* is used to refer back to such a phrase. Consider, for example, the following sentence:

48. *Abafana badlala khona*
 'Boys they-play there' (where *emva kwendlu* 'at the back of the house' has been referred to in previous discourse)
 'The boys are playing there'

In the light of this observation then, the view may be expressed that in sentence 46 the ANT of the so-called descriptive clause of place is the 'adverbial phrase of place' *emva kwendlu*. Such phrases will henceforth be referred to as locational ANTs. Thus the clause in sentence 46 appears to refer to a specific locality, i.e. the back of the house.¹⁶ In 47, on the other hand, the RC restricts the domain of reference of the ANT *indlu*; it specifies a particular house (out of a whole set of houses) in which the children play.

It may be stated then that in the initial sentence of our investigation, i.e. 42, the 'descriptive clause of place' actually refers to a specific locality; in this case the locality expressed by *at the house*. It does not serve to

specify or restrict the referent of the noun *indlu*, as is the case with the RC of 43. These facts are borne out clearer in sentences such as the following:

49. *Ngiya endlini [lapho abafana bedlala khona]*
 'I-go to-house [where boys they-play there]'
 'I am going to the house where the boys play'
50. *Ngiya endlini [abafana abadlala kuyo]*
 'I-go to-house [boys CRP-play in-it]'
 'I am going to the house in which the boys play'

In sentence 49, the locality expressed by *endlini*, i.e. *at the house*, functions as the ANT and the anaphoric pronoun, *khona* is used to refer to it. In sentence 50 on the other hand, the referent of *indlu*, i.e. the *house* itself, functions as the ANT and is referred to in the clause by the anaphoric pronoun *-yo*.

In the preceding section, three characteristic properties of RCs were discussed with reference to 'participial clauses'. Let us now reconsider these three properties with specific reference to 'descriptive clauses of place'.

Recall that the three properties concerned relate to the occurrence of: (i) the anaphoric pronoun; (ii) the specifier marker *a-*; and (iii) the relative suffix *-yo*.

With respect to (i) it has already been established that the clauses under consideration contain the pronoun *khona* which refers to a locational ANT. As regards (ii), a rather interesting situation is observed. These clauses commence with a form which is identical to that of the demonstrative pronoun of class 9. All three demonstrative positions have been noted to occur in this clause type, viz.

la/lapha, lapho and *laphaya*.¹⁷ Consider, for example, the following sentence:

51. *Ngiyayazi indawo* [$\left. \begin{array}{l} la \\ lapha \\ lapho \\ laphaya \end{array} \right\}$ *esebenza khona*]

'I-it-know place [where he-works there]'

'I know the place where he works'

The clause-initial word in this sentence, i.e. the demonstrative form, appears to function as a type of a 'relative pronoun' here.¹⁸ Like *khona*, this word refers, I believe, to the *locality* expressed by the ANT. Now it may be recalled that the a- which occurs in demonstratives is the same a- which occurs in RCs. If one accepts the view that languages tend to reduce redundancies, then, I believe, the co-occurrence of the 'relative pronoun' and the specifier marker a- in the clause under investigation here, represents one such case of redundancy. In other words, the specifier marker a- is already present in the clause-initial position and another occurrence of it in the relative predicate would yield a redundancy; this then explains its absence in the predicate of this clause type.

As is expected, these clauses have pronominal potential since they contain the specifier marker a-. This is illustrated in the following sentence where mention has already been made in prior discourse of two different localities:

52. [*Lapho umfana esebenza khona*] *kuyaziwa kodwa*

[*lapho...*

'[Where boy he-works there] it-is-known but

[where...']

'Where the boy works is known but where...'

Let us now consider (iii). The clause type under consideration does not contain an overtly marked relative suffix *-yo*. I believe there are two possible explanations for its absence. These are outlined below:

- (a) The relative predicate in these clauses is *always followed by an adjunct*, and as noted in Chapter 4 (cf. 4.3.1), there is a tendency for the relative suffix to be deleted in such instances. Consider in this regard the following sentences.

53. *Nansi indawo [lapho abantwana bedlala∅ ibhola khona]*

'Here-is place [where children they-play∅ football there]'

'Here is the place where the children play football'

54. *Nansi indawo [lapho abantwana bedlala∅ khona]*

'Here is place [where children they-play∅ there]'

'Here is the place where the children play'

- (b) It was noted in Chapter 4, section 4.2 that there is a dialectal variant of *-yo* in Zulu, namely *-kho*. Now the view could be put forward that *khona* in these clauses is in fact the abovementioned variant which in 'descriptive clause of place' is *not* cliticized. The reason why it is not cliticized however, does not appear to be clear; its uninflected occurrence could indicate that in this construction it is emphatic in significance.¹⁹ Clarification on this issue would, however, require further research.

Concluding remarks - In this section I have attempted to

show that so-called 'descriptive clauses of place' are in fact RCs of a particular type. These RCs always refer to localities and for this reason the term *Locational RCs* is suggested as a possible label for them. Unlike *Temporal RCs*, *Locational RCs* have pronominal potential, by virtue of the fact that they contain the specifier marker a- in what appears to be a 'relative pronoun'.

6.4 Concluding remarks on the RC types recognized in this study

The purpose of this concluding section is twofold. Firstly, I should like to compare some of the properties that characterize the three different RC types recognized in this study, namely *Nominal RCs*, *Temporal RCs* and *Locational RCs*. Secondly, I should like to comment briefly on a possible connection between the analysis presented in this study and certain ontological claims that have been put forward in the literature.

Characteristic properties of RCs - In the table below, some of the properties of the three different clause types are compared.

	Function as a dependent clause	Reference to ANT (overt or covert)	Pronominal potential	Occurrence of Specifier <u>a-</u>	Occurrence of An Pro (RS or other)
Nominal	✓	✓	✓	✓	✓
Temporal	✓	✓	x	x ¹	✓ ²
Locational	✓	✓	✓	✓	✓

Notes on Table:

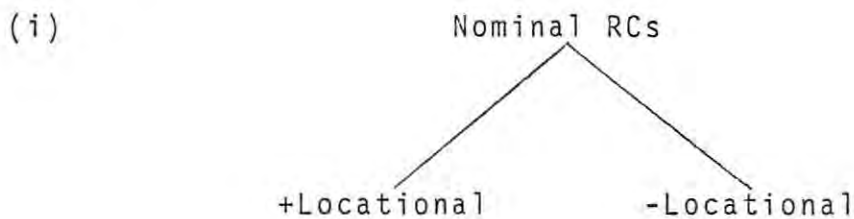
¹Use is made of tone as a specifier marker.

²In restricted cases only.

As is clearly indicated in this table, Locational RCs and Nominal RCs have much in common. Temporal RCs, on the other hand, show certain dissimilarities with both Nominal and Locational RCs. Pending further research, I should here like to suggest - in the light of the above observations - a possible recategorization of Zulu RCs into two basic types, namely:

- (i) *Nominal RCs*, involving Locational and Non-Locational ANTs, and
- (ii) *Temporal RCs*, involving Temporal ANTs.

This categorization could be schematically represented as follows:



- (ii) Temporal RCs.

Ontological considerations - Givon has put forward certain views concerning the way the human organism construes its universe. He states, for example,²⁰

"There is a wide range of facts from human languages which suggest that the semantic features by which we classify the noun universe are hierarchally arranged in a fashion that yields an *implicational scale*."

Givon extracts from this scale some of the most generic features, namely "concrete", "temporal" and "abstract" which he 'translates' into "exist in space", "exist in time"

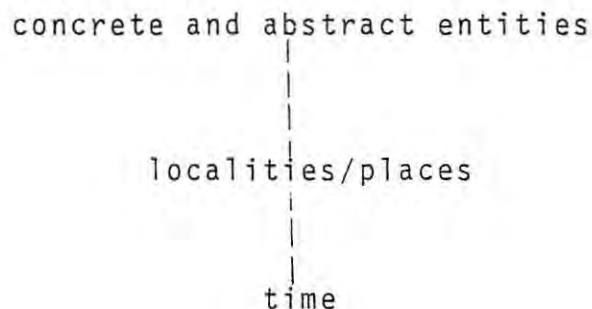
and "exist", the latter representing the most generic pole.

Turning to RCs, I believe that a study of these clauses can contribute to our understanding of the way in which the universe is construed. For example, the employment of three different types of RCs in Zulu reveals the fact that there are three basic conceptual categories in the universe that may be restricted. These may be outlined as follows:

<u>Type of RC</u>	<u>Category</u>
1) Nominal	1) Entity (concrete or abstract)
2) Temporal	2) Time
3) Locational	3) Locality

With regard to each of the above, the *syntactic* category that is restricted is as follows: in the case of 1, an NP; in 2, an 'adverbial phrase of time' and in 3 an 'adverbial phrase of place'.

Now in the light of the criteria that have been set out in terms of which a syntactic object may qualify as an RC, *Nominal RCs* appear to be the highest on the hierarchy, followed by *Locational RCs* and finally *Temporal RCs*. This would suggest that a corresponding conceptual hierarchy exists as well, which may be set out as follows:



Given the correctness of this hierarchy, it would appear as though the three different clause types appear on a scale where they vary from 'pure' RCs, which qualify or restrict the reference of an 'entity-like' constituent (i.e. Nominal and Locational RCs), to RCs which restrict the reference of "event-like" constituents (i.e. Temporal RCs).

Further research is required to clarify some of the issues raised above - issues which appear to imply a readjustment of Givon's hierarchy.

PROLEGOMENA TO A THEORY OF ZULU RELATIVIZATION
WITHIN CORE GRAMMAR

Given the findings of the pretheoretical analysis presented in the various chapters of Part 2, certain questions may be raised with regard to the possible accommodation of a theory of Zulu relativization within the framework of Core Grammar.

In section 2.3 of Chapter 2, three issues were isolated which, it was believed, would require particular attention when a theory of Zulu relativization is constructed. These concerned:

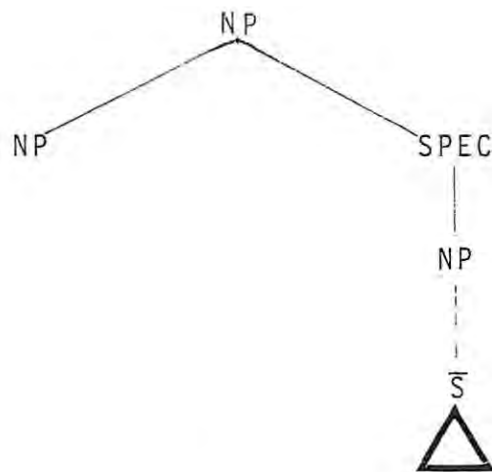
- (i) *The categorial status of RCs*
- (ii) *The properties of the complementizer system*
- (iii) *The nature of anaphoric relations*

These three issues may now be discussed in the light of my pretheoretical analysis. It should be stressed here, however, that the actual construction of a theory of relativization would far exceed the scope of this thesis, and for this reason the remarks made in the following paragraphs are merely suggestive and exploratory. (For the purposes of this discussion, knowledge of the contents of Appendix 2 is presumed).

The categorial status of RCs - From my pretheoretical analysis, it is clear that RCs should be treated as specifiers of NPs (ANTs). This observation could easily be accommodated within the formal theory, by developing RCs in the phrase structure rules under the category SPEC. The

fact that they have pronominal status also entails that they are dominated by NP, which confirms Chomsky's suggestion that *NPs*, in addition to *S*'s, must be considered recursive elements in the grammar.¹ Consider the following diagrammatic representation of these observations.

Diagram 1



It is, however, unclear at this stage how the formal theory would account for the fact that the distinction between the *pronominal* and *specifier* status of RCs (as well as demonstrative pronouns for that matter) is *discourse dependent*, which means that it falls outside the scope of a sentence grammar.

The properties of the complementizer system - The first rule in the categorial component of a core grammar, as noted in 2.5.1.1 of Appendix 2, is:

$\bar{S} \longrightarrow \text{COMP } S$

The COMP node, according to Chomsky, incorporates various complementizers or sentence-introducers,² such as the English *for*, *that*, *wh*-words etc. Now it is clear from my pretheoretical analysis of Zulu RCs, that there is no obvious element in Zulu which shows any similarity with the *wh*-relative element of English. The only element that could possibly fit into the COMP position in Zulu RCs appears to be the specifier marker a-. Yet this marker, I have argued, has both pronominal and specificity significances and thus *no sentence introducing significance*. In fact, the very position of this marker in certain RCs which are formed by Strategy 1, would counter any analysis that treats a- as an introducing element. In this regard consider, for example, the following sentence where the specifier marker a- occurs in *non-initial* position in the RC.

1. *Inja* [*abafana* *abayithengileyo*] *iyagula*
 'Dog [*boys* SpecM-SAM-it-bought-RS] *it-is-ill*
 'The dog that the boys bought is ill'

Interestingly, many languages have been noted not to have complementizers³ and in the light of the above observations, Zulu appears to be one such language, at least as far as RCs are concerned. Thus COMP is a vacuous category with respect to Zulu RCs. This could suggest that the universal rule

$$\bar{S} \longrightarrow \text{COMP } S$$

cannot, in fact, be the first categorial rule for Zulu relativization.

The observations made above on Zulu RCs indeed raise numerous questions on the analysis of *wh*-phrases or elements

in English - questions, for example, like the following:
Is the *wh*-element in English solely a sentence-introducing element? In other words, is the account given of it in the formal grammar sufficient to cover the possible significances associated with it or perhaps inherent in it?⁴

Answers to such question would obviously exceed the scope of the study, but perhaps in the light of the pretheoretical analysis undertaken in this study of Zulu RCs, a re-examination of the situation in English would be in order.

The nature of anaphoric relations - Coreferentiality is evidently a major phenomenon in relativization. Consider in this regard the following sentence where the coreferential elements are clearly indicated.

3. Abafana [engisebenza nabo] bahambile
'Boys [CRP-work with-them] they left'
'The boys with whom I work have left'

The question that arises here is: How should the relationship between the anaphoric element in the RC, namely -bo and the ANT *abafana* be expressed?

In a core grammar, the coindexing device would, subject to the conditions on control,⁵ adequately account for this type of anaphoric relation. There are, however, a few significant considerations that need attention.

To begin with, recall that pronouns are base generated categories in a core grammar.⁶ Yet given a discourse perspective on the nature and function of RCs, the actual *occurrence of a pronoun in an RC* is, I believe, a highly problematic issue - this is so, despite the fact that *no full NP*

can occur within an RC, which may refer to an entity outside the clause. Consider in this regard the following sentences:

4. *Abafana [engisebenza nabafana] bahambile
 5. *Bona [engisebenza nabafana] bayagula

Now the 'c-command' condition⁷ would account for the ungrammaticality of sentence 5 but to my mind there is no condition or filter that would rule out sentence 4. Even Lasnik's rule of non-coreference⁸ would not rule out this sentence since the NPs involved *cannot be disjoint in reference*. There is nothing that appears to prevent the development of a surface filter to rule out a sentence such as 4, except that Chomsky has proposed that in order to constrain the power of surface filters they should be restricted to the extent that they apply only with reference to the complementizer system.⁹

Let us now consider certain discourse problems that arise concerning the occurrence of pronouns in RCs. Consider first the following sentence:

6. *Umfana [uthisha amshayileyo] uyakhala*
 'Boy [teacher CRP-him-hit] he-is-crying'
 'The boy whom the teacher hit is crying'

The information expressed in the RC of this sentence, namely that *the teacher hit the boy* 'precedes' the information expressed in the main clause, namely that *the boy is crying*. Thus the information presented in the RC may be considered to be 'old information' with respect to the information presented in the main clause. This would imply then that if the two clauses of the above sentences

were in fact simple sentences, then the sentence representing the RC in 6 would precede in discourse sequence, the sentence representing the main clause. Compare, for example, the following sequences.¹⁰

7. *Uthisha ushaye umfana. Yena uyakhala*
 'Teacher he-hit boy. He he-is-crying'
 'The teacher hit the boy. He is crying'
8. **Umfana uyakhala. Uthisha ushaye yena*

Now the occurrence of a pronoun presupposes prior mention of a full NP. To begin a discourse with a sentence such as 9 below, for example, would be inappropriate if the referents of *bona* are not known.

9. *Bona bayagula...*
 'They they-are-ill...'
 'As for them, they are ill...'

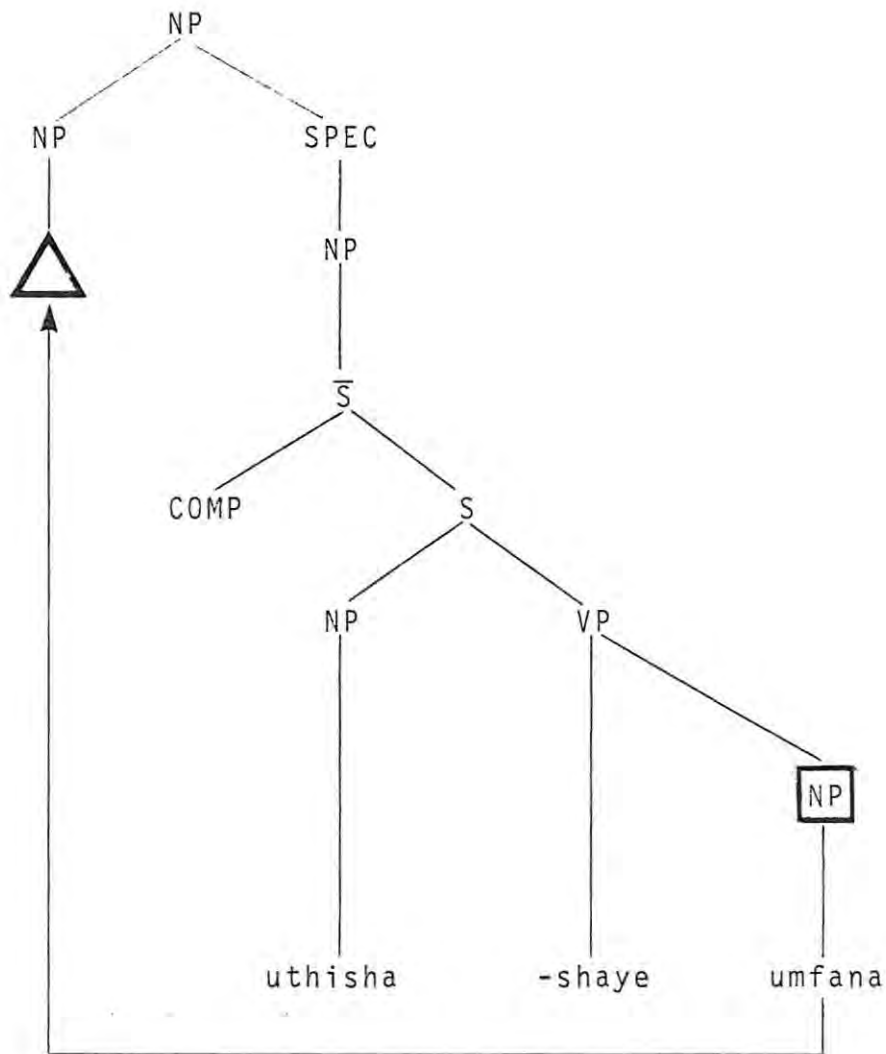
If an RC such as the one exemplified in 6 is considered to convey old information and a main clause, new information, then the occurrence of the pronoun in the RC is comparable to the situation in 9 above where a discourse situation commences with a pronoun. This observation relates to the perennial problem in the study of relativization, namely: How should coreference between the ANT and the coreferential element in the RC be expressed? Several alternatives have been entertained in the literature. In Chapter 2 (cf. 2.2.2.1 and 2.2.2.2), the properties that characterize some of these alternatives were outlined. Now, in the light of the observations made with regard to sentence 6 it would appear as though the so-called 'head-raising' analysis could adequately account for the derivation of such a sentence. As noted,¹¹ the essence of this analysis

is that the head (ANT) of an RC originates inside the RC in underlying structure. McCloskey characterizes the process involved as follows:¹²

"The head NP-position is unfilled in underlying structure and a Raising rule promotes the relativized NP from inside the clause to fill the empty head position."

Sentence 6 would therefore roughly be derived as follows:

Diagram 2



The derivation outlined in this diagram would appear to overcome the discourse problems discussed earlier. A problem, however, arises with regard to this derivation. This concerns the fact that the moved NP *umfana* leaves behind a pronoun, namely *-m-* in the RC. This would imply that pronouns are transformationally derived and not base-generated as is stipulated by Core Grammar. One possible solution to this problem would be to interpret the *index* that is left behind by the moved NP as one which is *phonetically spelt out in the surface as a pronoun*. Further clarification on this issue is, however, required.

With this problem in mind, I should here finally like to consider another possible derivation for the RC in sentence 6. This derivation relates to the viewpoint that only *themes* are relativized.¹³ In terms of this approach then, the head-NP or ANT in 6, *umfana* could be viewed as the *theme* of the RC *uthisha amshayileyo*. The view may then be expressed that every subsequent reference to the theme *umfana*, would be in the form of a pronoun. This would imply that a pronoun in such a derivation is *base-generated* which would conform to the standpoint taken in Core Grammar, namely that pronouns are generated by the base rules.

CONCLUSION

In this thesis, the traditional analysis of Zulu RCs has been shown to be superficial and atheoretical in its objectives. Traditional grammarians made numerous interesting observations but failed to provide explanations for the problematic phenomena they observed. In Part 2 of this thesis, I have reexamined certain problems that have emerged from their descriptions and have also isolated and explored numerous additional problems.

In an attempt to provide explanations for these various problems, I have invoked both formal as well as non-formal concepts. My analysis has subsequently revealed the indispensableness of considering non-formal concepts for an understanding of Zulu relativization phenomena. These concepts are in principle fully or partly excluded from current theorizing within transformational generative grammar. This study has therefore shown that, as far as Zulu relativization is concerned, it is necessary to go beyond the domain of the formal theory in order to gain an understanding of various aspects of RCs.

Thus it has been established, for example, that insights into the significance(s) of, *inter alia*, the traditionally named 'relative concord' cannot be gained without a consideration of pragmatic, relational, typological and perceptual phenomena. Likewise typological and pragmatic considerations play a crucial role in the understanding of the significance of the relative suffix. Furthermore, the distribution of the two forms of the subject agreement marker of Class 1 sg. can only be explained in terms of pragmatic considerations. It has also been established that the three types of RCs recognized in this study, *viz.*

Nominal RCs, Temporal RCs and Locational RCs are distinguished in terms of features which appear to be intimately related to ontological concepts.

As a result of the analysis undertaken in this study, the opinion is expressed that the apparent multifaceted dimensions of Zulu relativization cannot be accounted for by the rigid formal theoretical concepts of a single theory, such as the one conceived within the transformational generative framework; in other words, it is believed that a monotheoretical approach would not be able to account for the various problematic issues that have been raised in this thesis concerning Zulu RCs. The formal theory would, in fact, have to be enriched to accommodate dimensions or facts of language such as pragmatics, typology and ontology - dimensions, which in the light of my analysis, obviously constitute a part of the linguistic knowledge of the speaker/hearer of a language.

This is obviously a very strong claim to make, given the power and persuasiveness of the formal framework, i.e. transformational generative grammar; yet it is clear from various recent publications that there is a growing feeling, if not conviction, among reputable linguists that transformational generative grammar excludes from its conceptual framework certain considerations which may be crucial for a genuine understanding of this fascinating phenomenon called *language*. Consider, in this regard, for example, the following views expressed by Bach:¹

Certain aspects of human experience are common to all people. It is this matrix of common experience that is the stuff of which grammars are made: causation, human responsibility and intentionality, temporal and spatial relations, important classifications of

the things in the world (animateness, sex), number, social hierarchy, family relations. Such notions probably enter in one way or another into every human language either as covert or overt categories (to use Whorf's terms). I believe that many universal aspects of language will be understood in the end as resulting from an interaction between the innate language-creating gift of the human animal and this common matrix."

Even though the boundaries of this common matrix are as yet not fully understood, it is hoped that the findings of this thesis contribute in some way to the refinement of such boundaries.

A significant contribution of my inquiry, I believe, has been the recognition of three types of RCs. The examination conducted on these various types has led to the identification of certain characteristic properties of RCs, which call for a revision of the definitions that have been commonly entertained in the general literature. Despite the various insights that may derive from my inquiry, numerous issues have been raised which require further clarification - issues which would have involved research beyond the scope of this study. To name only a few: Further comparative evidence is required to support the views expressed concerning the semantic significance(s) of the specifier marker a- and relative suffix -yo; the role of perceptual considerations in the understanding of surface forms of RCs needs to be developed further; a detailed look at the specifier system of the Zulu language could throw more light on the categorial status of RCs; finally, with regard to Temporal RCs, the syntactic statuses of the conjunctives that introduce them and the auxiliary verbs that govern them need further investigation.

FOOTNOTESINTRODUCTION

- 1) According to Doke's classification: see Cole (1961: 80-96). On the classification of Bantu languages see also:

Fivaz, D. and P.E. Scott
1977 *A genetic and decimalised classification for bibliographic and general reference.* Boston, Mass.: G.K. Hall & Co.

- 2) Preliminary figure of 1980 census - 5 420 882. Personal communication with the Department of Statistics, Pretoria.

- 3) Bryant (1849)

- 4) The following are some of the works written by these grammarians:

Bryant, J.C.
1849 "The Zulu language", *Journal of the Oriental Society* 1:383-396.

Colenso, J.W.
1903 *First steps in Zulu: Being an elementary grammar of the Zulu language.* Pietermaritzburg: Vause, Slatter.

Grout, L
1893 *The IsiZulu: A revised edition of a grammar of the Zulu language.* London: Kegan Paul, Trench, Trübner.

Schreuder, H.P.S.
1850 *Grammatik for Zulu-sproget.* Christiana: W.C. Fabritius.

For further discussion of the above and other works see Doke (1959:14-20).

- 5) "A Jubilee tribute to Professor Emeritus Clement Martyn Doke", *African Studies* (1971).

- 6) *Ibid*:178

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- 7) Newmeyer (1980:3)
- 8) *Ibid*:4
- 9) For a discussion of the concept *scientific revolution* see, inter alia, Kuhn (1962).
- 10) This is well illustrated, for example, in the following works on Bantu languages:

- Bokamba, E.G.
1976 *Question formation in some Bantu languages.* Ph.D. dissertation. Indiana University.
- Bokamba, G.D.
1971 "Specificity and definiteness in Dzamba," *Studies in African Linguistics* 2(3):217-238.
- Givon, T.
1972 "Studies in ChiBemba and Bantu grammar," *Studies in African Linguistics* 3, suppl. 3.
- Hendrikse, A.P.
1975 *Topics in Xhosa relativization.* Grahamstown: Rhodes University. (Communication no. 4, Department of African Languages).
- 1977 *Aspects of Xhosa sentential complementation: A grammatical inquiry within a framework of modern linguistic theory.* Grahamstown: Rhodes University. (Communication no. 7, Department of African Languages).
- Olinick, J.O.
1967 *A transformational generative grammar of certain noun phrases in Swahili.* Ph.D. dissertation. University of Wisconsin.
- Wald, B.
1970 "Relativization in Umbundu," *Studies in African Linguistics* 1(2):131-155.
- Walusimbi, L.
1976 *Relativization and focussing in Luganda and Bantu.* Ph.D. dissertation. Los Angeles: University of California.

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Walusimbi, L. and T. Givon
 1970 "Conjoined and stacked restrictive relative clauses: Deep and not-so-deep constraints in light of Luganda data," *Studies in African Linguistics* 1(2):157-182.

- 11) Newmeyer *op.cit.*:20.
- 12) *Ibid*:20-21.
- 13) *Ibid*:19.
- 14) *Ibid*:13.
- 15) *Ibid*:20.
- 16) *Ibid*:20.
- 17) Givon (1979:41-42).
- 18) *Ibid*:44.
- 19) Newmeyer *op.cit.*:20.
- 20) Lyons (1970:116).
- 21) *Ibid*:9.
- 22) Sinclair (1978:(i)-(v)).
- 23) *Ibid*:(i).
- 24) *Ibid*:(ii)-(iii).
- 25) *Ibid*:(iii).
- 26) *Ibid*:(ii).
- 27) *Ibid*:(iii).
- 28) Lyons *op.cit.*:9.
- 29) See section 2.2 of Appendix 2 on page 269 for a discussion of the fundamental assumptions of the formal theory.

PART 1/CHAPTER 1

- 1) McCawley (1979:ix-x).
- 2) Dinneen (1967:192).
- 3) For an overview of the different eras of linguistic analysis, see, for example, Dinneen *op.cit.*
- 4) See Doke (1960) for a discussion of the contribution made by these and later comparativists.
- 5) Doke (1959a:1)
- 6) For a detailed discussion of their contribution see Doke *op.cit.*
- 7) Grout (1893:59,81ff).
- 8) Schreuder (1850:16).
- 9) Colenso (1903:25).
- 10) In this regard see Ungerer (1975:7ff).
- 11) Cole (1957:7).
- 12) Doke's *Textbook of Zulu grammar* was first published in 1927 by the University of the Witwatersrand Press.
- 13) The important contributions made by other grammarians in this era to the study of the relative construction should not be underestimated. For a survey of their contributions see Ungerer *op.cit.*
- 14) See p.2 for a discussion of the fundamental tenants of this approach. For a more detailed discussion see, inter alia, Robins (1967).
- 15) *Ibid*:207.
- 16) Bloomfield (1933:139).
- 17) *Ibid*:140.
- 18) Bloch (1948)
- 19) The views of these different schools are well presented in, inter alia, the following works: Dinneen (1967), Lyons (1968) and Maclay (1971).

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- 20) Reference is made here, for example, to the methodological principles and objectives of each of these schools.
- 21) As Hendrikse notes, "to define a certain object intentionally is to enumerate the distinctive or characteristic features of this object." Hendrikse (1974b: 9.
- 22) Maclay (1971:159).
- 23) *Ibid*:161.
- 24) This summary has been extracted from Doke (1955) and (1965).
- 25) Doke (1955:1).
- 26) Doke (1965:33).
- 27) Doke (1955:2).
- 28) Doke (1965:33).
- 29) For definitions of these fundamental parts of speech, see Doke *op.cit.*:33-34.
- 30) *Ibid*:34.
- 31) For a further discussion of the real parts of speech see Doke *op.cit.*:34.
- 32) *Ibid*:33.
- 33) Doke is not consistent in his choice of terms when referring to the *real* parts of speech which he labels *the relative*. Though he defines the relative as a "word which qualifies a substantive and is brought into concordial agreement therewith by the relative concord" (Doke (1965:105)), he nevertheless uses this term to refer to clauses as well. Thus he speaks of "relative clauses of subjunctival verb relationship" (Doke (1955:60)), but "the relative of direct relationship" and "the relative of indirect relationship" (Doke (1955:56)). This discrepancy, coupled with his references to the undefined expression, relative construction, creates confusion, as is well illustrated, for example, in the following quotation:

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"All relatives and relative clauses are introduced by the relative concord, but the relative is sharply distinguished from the other three types of qualificative in that there is a relative construction in which the relative concord is not in agreement with the antecedent."

Doke 1955:56)

For consistency purposes, I shall henceforth in this chapter employ only the terms *relative* and *relative construction*. The former is used in the sense defined by Doke above and the latter refers to larger constituents such as phrases and clauses, these terms being defined by Doke as follows:

"... a CLAUSE may be defined as A PREDICATIVE STATEMENT WHICH FORMS PART OF A SENTENCE INVOLVING MORE THAN ONE PREDICATE. The essential characteristic of a clause is that its predicate is expressed in one of the finite moods (indicative, potential, subjunctive or participial) of the Zulu conjugation.

A PHRASE, on the other hand, typically lacks the predicative element..."

Doke 1955:6)

- 34) Doke (1965:105).
- 35) There is a variant form in this class, namely a-, the occurrence of which is discussed in 1.4.5.
- 36) See Doke *op.cit.*:107ff for further details.
- 37) For a discussion of this concept see Doke *op.cit.*:23.
- 38) These types are dealt with in Doke *op.cit.*:311ff.
- 39) *Ibid*:311.
- 40) Doke (1955:57).
- 41) For a more detailed list of these stems see Doke (1965:105-106).
- 42) Doke (1955:59).

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- 43) The first form exemplified in this sentence appears to be the preferred form.
- 44) Doke *op.cit*:63.
- 45) This formative has also been referred to as the relative suffix in traditional works. In this regard see, for example, Wilkes (1964:130).
- 46) Doke (1965:324-325).
- 47) *Ibid*:97.
- 48) Botha (1968:48).
- 49) *Ibid*:1.
- 50) Hendrikse (1974b:3).
- 51) Botha *op.cit*:50-51.
- 52) *Ibid*:66.
- 53) Harré (1963:25).
- 54) *Ibid*:31.
- 55) *Ibid*:26.
- 56) *Ibid*:29.
- 57) Hendrikse *op.cit*:15.

CHAPTER 2

- 1) Downing (1978).
- 2) *Ibid*:378.
- 3) *Ibid*:379.
- 4) *Ibid*:378.
- 5) See Downing *op.cit*.381ff for a discussion of these and other generalizations.
- 6) For a more detailed discussion of this point, see Downing *op.cit*.:381-382.

CHAPTER 2 - contd

- 7) Vendler (1980:209).
- 8) Givon (1979b:81).
- 9) Givon (1979a:31).
- 10) Kuno (1976).
- 11) *Ibid*:438.
- 12) For a detailed exposition of such an approach see Keenan and Comrie (1977).
- 13) *Ibid*:66.
- 14) *Ibid*:64.
- 15) *Ibid*:66.
- 16) *Ibid*:88.
- 17) See, for example, Jacobson (1978:341ff), Taglicht (1972), Langacker (1972:145ff), Bache and Jakobsen (1980).
- 18) Bache and Jakobsen *op.cit.* provide interesting disconfirmatory arguments of certain well accepted assumptions concerning the differences between RRCs and Non-RRCs.
- 19) Keenan and Comrie *op.cit.*:63-64. It should be noted that Keenan and Comrie refer in this definition to RCs without drawing a specific distinction between RRCs and Non-RRCs. It is clear, however, even though it is not explicitly stated, that this definition refers solely to RRCs.
- 20) Further generally accepted differences between RRCs and Non-RRCs in English may be summarized as follows:

RRCs	Non-RRCs
1. Permit <i>that</i> as a relative pronoun.	1. Do not permit the complementizer <i>that</i> as a relative pronoun.
2. No comma intonation.	2. Require comma intonation after the head NP.

CHAPTER 2 - contd

RRCs	Non-RRCs
3. May not modify proper nouns that have no determiners.	3. May modify proper nouns that have no determiners.
4. May modify <i>any + N</i> .	4. May not modify <i>any + N</i> .
5. May not modify an entire proposition.	5. May modify an entire proposition.

Furthermore, the constraints which determine what can be fronted along with the shared NP in the relative clause are not the same in the two types: cf. *The crimes, over which his anguish was intense, were less serious than he thought*, (Non-RRC) but not *The crimes over which his anguish was intense were less serious than he thought* (RRC).

See Bache and Jakobsen *op.cit.* for interesting counter arguments to some of the above observations.

- 21) Downing *op.cit.* 381.
- 22) Jackendoff (1977:172).
- 23) See, for example, Thompson (1968), (1971) and Ross (1967:239ff).
- 24) By conjoined sentences is meant that two or more sentences are not in a relationship such as one sentence functions as a constituent of another.
- 25) See 2.2.2 of Appendix 2 for a further discussion of this phenomenon.
- 26) See, in this regard Stockwell, Schachter, Partee *op.cit.*:423ff and Jackendoff *op.cit.*:169ff.
- 27) See Vergnaud (1974) for more details of this approach.
- 28) With these two factors in mind, certain issues arising out of the alternative analyses may be tabulated as follows:

CHAPTER 2 - contd

Analysis	P-Rule (indicating position of S)	Function	Coreferential entity in the RC
(i) ART-S/ Determiner NP-S	DET → ART S	As a Determiner	N
(ii) NP-S	NP → NP S	Modifies whole NP	NP
(iii) Nom-S/N-S	Nom → Nom S/ N → N S	Modifies Nom/N	Nom/N

29) Note, for example, the following surface forms which result from the application of these processes. The relative clause in each case occurs within square brackets:

(i) Deletion of the coreferential element:

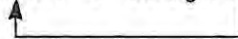
The dog [I bought \emptyset] is an Alsatian

Pronominalization of the coreferential element:

The dog [*which* is barking] is an Alsatian

(ii) Movement of the pronominalized element:

The dog [*which* I bought] is an Alsatian



30) For a further discussion of these constraints, see Stockwell, Schachter and Partee *op.cit.*:449-455.

31) Keenan and Comrie *op.cit.*:64.

32) *Ibid*:65.

33) Thompson (1971:81).

34) Core Grammar which is generally acclaimed to be the best available formal theory, has not figured largely in recent research publications on Southern African Bantu languages. In fact, in a broader sense, a synthesis of various aspects of Core Grammar, which have appeared in several articles and other publications, is not readily available. Since my study has, as one of its objectives, a pretheoretical investigation of

CHAPTER 2 - contd

surface syntactic phenomena in Zulu with a view to the ultimate construction of a formal theory, I have gone through this exercise of constructing such a synthesis for the study and have decided to make it available in the form of an appendix to this thesis. Thus although Appendix 2 may appear not to be directly integrated with the body of this thesis, it is, I believe, voluminous in scope and could provide the basis for the construction of a theory of Zulu relativization in ongoing research.

PART 2/CHAPTER 3

- 1) Givon (1979:311).
- 2) Newmeyer (1980:209).
- 3) Keenan and Comrie (1977:64).
- 4) The abbreviations ANT and RC will be used to refer to the antecedent and relative clause respectively.
- 5) See 1.4.2 of Chapter 1.
- 6) The boundaries of this clause are not clear. I argue for a reinterpretation of these boundaries in Chapter 6 (Section 6.2).
- 7) For a further discussion of these strategies, see Keenan and Comrie *op.cit.*:64.
- 8) Doke (1965:105)
- 9) For further information on some of these terms see Ungerer (1975:69ff).
- 10) See Ungerer *op.cit.* for more information on some of these terms.
- 11) Note that other descriptions have also been advocated with regard to this part. For example, Wilkes (1964:75) refers to it as, "...('n konkordiale element wat lyk soos) 'n onderwerpskake1."

CHAPTER 3 - contd

- 12) See Hendrikse (1975c).
- 13) Langacker (1968:132).
- 14) See Downing (1978:385).
- 15) Hendrikse (1975d).
- 16) *Ibid*:40.
- 17) Schreuder (1850:49-50).
- 18) The nature of this relationship is discussed in 3.3.2.
- 19) Downing *op.cit.*
- 20) *Ibid*:385.
- 21) Lyons (1977:636).
- 22) Ziervogel (1961:91).
- 23) In this regard, for example, Ungerer *op.cit*:99, says
 "Hier wil dit verder gevoer word n̄. dat hier-
 die demonstratiewe la-, 'n stam is..."
- 24) *Ibid*:102.
- 25) The monosyllabic forms of this position have alternates with an ending *-na*, hence *lona*, *lana* etc. For more information on these forms, see Doke *op.cit.*: 91.
- 26) *Ibid*:92.
- 27) Grout (1893:90).
- 28) Van Eeden (1956:151).
- 29) Ungerer *op.cit.*:79.
- 30) *Ibid.*
- 31) I am indebted to Mr T W Muloiwa for the Venda data. The Swahili examples have been cited from Wilson (1972:273 and 270). Literal translations have been

CHAPTER 3 - contd

added for the sake of clarity.

- 32) The occurrence of the anaphoric pronoun (An Pro) in such examples will be investigated in Chapter 4 (cf. 4.3.2).
- 33) For a further discussion of this class prefix see Doke *op.cit.*:47ff.
- 34) For more information on the Qwabe see Bryant (1929: 184ff).
- 35) Lyons *op. cit.*:637.
- 36) *Ibid*:646.
- 37) Thorne (1972:8) suggests that the demonstrative pronoun *that* is derived from an underlying structure which incorporates the locative expression *there*. Thus the phrase *that man*, would, according to him, be derived from, *man* [_S *who is there*]. It is interesting to note the occurrence of the verb-to-be in this underlying structure.
- 38) For a discussion of the distribution of these two copulas see Loogman (1965:228ff).
- 39) These examples have been cited from Loogman *op.cit.*: 229.
- 40) *Ibid*:230.
- 41) Item 547 in Guthrie (1971).
- 42) See Loogman *op.cit.*:231ff and Cole (1955:316ff) for more examples in this regard.
- 43) See Doke *op.cit.*:229ff for a discussion of these forms.
- 44) The adjective and possessive are dealt with in detail by Doke. In this regard see Doke *op.cit.*:chapters 6 and 9.
- 45) Hawkins (1978:152).
- 46) Cole *op.cit.*:172.
- 47) Lyons *op.cit.*:647.

CHAPTER 3 -cont

- 48) Lyons *op.cit.*:647.
- 49) Hendrikse and Poulos (1980:90).
- 50) Keenan and Comrie *op.cit.*:63-46.
- 51) Givon (1978:293-294).
- 52) Hendrikse (1977:204).
- 53) *Ibid*:205.
- 54) *Ibid*.
- 55) Givon (1979a:107).
- 56) Lyons *op.cit*:652.
- 57) The possessive construction per se contains a formative *a-*, e.g. *yomfana* < *ya* + *umfana*. The status of this formative *a-* and its relationship with the formative *a-* under discussion here, i.e. the *a-* incorporated in *e-* of *eyakho*, is not clear. One can at least state that in Zulu the former *a-*, i.e. the 'possessive *a-*' does not have pronominal status. However, in a language such as Venda, a different situation obtains, namely that this very 'possessive *a-*' appears to have pronominal status. Consider, for example, the following sentences:

Mmbwa yanga i a lwala
 'Dog of-me it is ill'
 'My dog is ill'

Yanga i a lwala
 'Of-me it is ill'
 'Mine is ill'

Further research needs to be done on these rather interesting differences between such languages as Zulu and Venda. In the present context, only the 'non-possessive *a-*', that is the one with pronominal potential, concerns us.

- 58) The distinction between RRCs and Non-RRCs is not a major issue in my thesis. For this reason the examples set out in my analysis are limited to RRCs only. Few remarks are made on Non-RRCs where appropriate.

CHAPTER 3 - contd

- 59) Keenan and Comrie *op.cit.*:64.
- 60) See *Ibid*:66ff for a detailed discussion of this hierarchy.
- 61) *Ibid*:88.
- 62) *Ibid*:67.
- 63) *Ibid*:88.
- 64) Keenan and Comrie, as noted, make the assumption that syntactic processes are ways of encoding meanings. Even though this may indeed be valid, I would like to suggest that when the strategy in sentence 63 is used, the speaker has an intuitive feeling that there may be difficulties involved in the *decoding* of the message by the listener, hence the use of the term *decode* here instead of *encode*.
- 65) It is interesting to note that Keenan and Comrie have observed the awkward nature of the GEN position in various languages. In this regard they state, for example,

"Although a majority of languages in our sample possessed some way of relativizing genitives, there was often some awkwardness in doing so, and not infrequently, in specific cases, a preferred alternative was offered."

Keenan and Comrie *op.cit.*:90

I believe the awkwardness of the GEN position can be explained in terms of the fact that this is the only position on the hierarchy that functions as a *specifier* of an NP. Compare, for example, the simplex sentences 1 and 2 below. The forms that concern us here are *inkomo* which functions as the direct object in 1 and *kababa* as the genitive in 2.

1. *Ngibone inkomo*
'I-saw cow'
'I saw a cow'
2. *Ngibone inkomo kababa*
'I-saw cow of-my-father'
'I saw my father's cow'

CHAPTER 3 - cont

Note that *kababa* in 2 is a specifier of a noun *inkomo*. The whole NP here, *inkomo kababa*, functions in turn as the direct object of the predicate. This whole NP may assume various functions in a sentence, for example, it may function as subject, direct object, indirect object etc. of the predicate. I believe that it is this very fact, namely that a genitive may be incorporated in an NP which may in turn assume various functions in a sentence, that underlies the numerous so-called possessive relationships that have been recognized in traditional grammars. Note, for example, the following sentence where the ANT functions as the possessor or genitive of an NP which in turn functions as the direct object of relative predicate.

3. *Umfana [engithengeinja yakhe] uhambile*
 'Boy [CRP-bought dog of-him] he-left'
 'The boy whose dog I bought has left'

- 66) See Kuno (1976).
 67) *Ibid*:427.
 68) *Ibid*.
 69) For a further discussion of this notion see Lyons *op. cit*:500ff.
 70) Since there does not appear to be any clarity on a clear-cut distinction between the notion *theme* and *topic*, this marker could possibly also be referred to as a 'topic agreement marker'.

CHAPTER 4

- 1) Wanger (1927:266).
 2) *Ibid*:267. (The hyphens in these examples are used by Wanger to indicate morpheme boundaries). For the sake of clarity, I have added literal translations to Wanger's examples.
 3) See, for example, Wilkes (1964:132). Wilkes attributes the absence of co-variation to a process which he calls a 'gelykmakingsproses'.

CHAPTER 4 - contd

- 4) *Ibid.*
- 5) Westphal (1946:119).
- 6) Hendrikse and Poulos (1980:87).
- 7) *Ibid*:88.
- 8) A hierarchy such as the one set out here in which all the classes are organized relative to one another, would be far more significant than the arbitrary classification of nouns according to a numbering system, as is currently the case.
- 9) Givon (1979:316).
- 10) *Ibid*:316-317.
- 11) See Doke (1965:37ff) on the emphatic nature of these so-called 'long forms'.
- 12) I am indebted to Dr J.K. Louw and Mr W.M. Mwambakulu for the Chewa data.
- 13) As an illustration of the use of the demonstrative as a definitizer in discourse see Hendrikse (1975d:46ff).
- 14) Wilkes *op.cit.*:132.
- 15) Ungerer (1975:143).
- 16) Examples 50-60 have been cited from Ashton (1949:110, 111, 112 and 205). It should be noted here that alternative ways of forming RCs in Swahili are not considered in this present discussion. For a discussion of these see Wilson (1972:262ff).
- 17) For a more detailed discussion on auxiliary verbs see Cole (1955:Chapter 13), Louw (1949) and Slattery (1981).
- 18) Cole *op.cit.*:286.
- 19) See Doke (1965:169) for a discussion of this tense.
- 20) Cole *op.cit.*:286.

CHAPTER 4 - contd

- 21) Interestingly the same phenomenon occurs in Southern Sotho. In this language the relative suffix has the form *-ng*. The origin of this suffix is not clear. I believe it could be derived from the actual *noun class prefix* of class 5 sg., and not the absolute pronoun. Further research in this regard is required.
- 22) These examples have been cited from Loogman (1965).

CHAPTER 5

- 1) See Hendrikse (1975c:3) for a detailed discussion of these parameters with respect to Xhosa RCs.
- 2) Doke (1965:316-317).
- 3) Hendrikse *op.cit.*
- 4) See Chapter 3, section 3.4.2, or a discussion of the perceptual differences involved in such sentences.
- 5) I shall henceforth in this section use the abbreviation CRP for (composite relative prefix), instead of the Dokeian term 'relative concord'.
- 6) Wald (1970).
- 7) *Ibid*:145. Literal translations have been inserted for the sake of clarity.
- 8) *Ibid.*
- 9) *Ibid*:146.
- 10) *Ibid*:147.
- 11) *Ibid*:149.
- 12) Givon (1979:83).
- 13) *Ibid*:85.
- 14) *Ibid.*
- 15) When a main clause occurs independently I shall refer to it as a main *sentence*.

CHAPTER 5 - contd

- 16) Givon *op.cit.*:110.
- 17) *Ibid*:109-110. In the examples cited literal translations have been inserted indicating the focus formative.
- 18) *Ibid*:110.
- 19) *Ibid*:110-111.
- 20) Within a performative verb analysis (cf Ross (1970)), the implied agent would appear overtly as the subject of a performative verb, such as *permit*, in the underlying structure. This performative clause would then be deleted in the derivation of the potential.
- 21) Givon *op.cit.*:84.
- 22) *Ibid*.
- 23) *Ibid*.
- 24) In this regard see Chomsky (1977e:147).
- 25) Wasow (1979:1).
- 26) *Ibid*:2.
- 27) Downing (1978:385).
- 28) Givon *op.cit.*:150.
- 29) Givon (1976:151).
- 30) *Ibid*:167.
- 31) *Ibid*:154.
- 32) *Ibid*:155.
- 33) *Ibid*:156.
- 34) *Ibid*:167.
- 35) *Ibid*:151.
- 36) Downing *op.cit.*:385.

CHAPTER 5 - contd

- 37) Cole (1955:127).
- 38) The occurrence of the question mark indicates that this sentence is odd.

CHAPTER 6

- 1) See, for example, Doke (1965).
- 2) In this regard see, for example, Cole (1955:236).
- 3) This is a selection of conjunctives in Zulu. For more details see Doke *op.cit.*
- 4) For a more detailed discussion of these verbs see Louw (1949) and Slattery (1981).
- 5) See Quirk, Greenbaum and Leech (1972) for a discussion of these constructions in English.
- 6) Dinneen (1967:100).
- 7) Note that on a restrictive interpretation this sentence is ungrammatical. On a non-restrictive interpretation however, it is grammatical.
- 8) Keenan and Comrie (1977:64).
- 9) Downing (1978:378).
- 10) The tones on the SAMs of 'participial' verbs are all low while the tones on the SAMs of 'principle' verbs are, generally speaking, high, with the exception of first and second persons.
- 11) Doke *op.cit.*:190.
- 12) Fortune (1955:295).
- 13) *Ibid*:182.
- 14) See Doke and Vilakazi (1953) for a further explanation of the meanings of these words.
- 15) The nature of the ANT in instances where an auxiliary verb is used is not clear at this stage. I believe

CHAPTER 6 - contd

more research on the semantic and syntactic significances of auxiliary verbs could throw additional light on the present analysis.

- 16) Whether 'descriptive clauses of place' actually *restrict* the locality expressed by the ANT is not quite clear. It could be argued that the word *emva* already performs this function, and the 'descriptive clause of place' then merely adds information about the locality. If this assumption is correct then 'descriptive clauses of place' could be seen to function as Non-RRCs. See chapter 2, section 2.2 for more information in this regard.
- 17) The form *laphaya* is not commonly used in this construction.
- 18) See Chapter 3, section 3.2 for more information on the function of a 'relative pronoun'.
- 19) See Chapter 5, section 5.2.4 for more information on the emphatic/unemphatic significance of absolute pronouns.
- 20) Givon (1979a:314ff).

PROLEGOMENA TO A THEORY OF ZULU RELATIVIZATION WITHIN
CORE GRAMMAR

- 1) See Chomsky (1972:54).
- 2) See Appendix 2, section 2.5.1.1 for more details.
- 3) In this regard see, for example, Newmeyer (1980:233).
- 4) I refer here specifically to: (i) the 'landing site' condition set out in Table 1 of Appendix 2, and (ii) the postulation of a COMP node for such elements.
- 5) See Table 6 of Appendix 2 for more details in this regard.
- 6) See Appendix 2, section 2.9.1.
- 7) See Table 7 of Appendix 2 for a characterization of this condition.
- 8) This rule is set out in Appendix 2, section 2.9.1.

PROLEGOMENA... contd

- 9) See Appendix 2, section 2.7.2.
- 10) There is a temporal dependency between the actions expressed in the sentences of the discourse in 7, namely the action of *crying* is a consequence of the action of *hitting*. Given this temporal dependency, the discourse in 8 where the action of *crying* precedes that of *hitting*, is unacceptable. On the same note, I should like to refer to sentences such as the following where the action expressed in the second clause, here an RC, is always temporally dependent on the action expressed in the first clause.

Uthisha ushaye abantwana [okuphathe kabi abazali]

'Teacher he-hit children [CRP-treat badly parents]'

'The teacher hit the children, which upset the parents'

The observation made concerning the temporal dependence of the two clauses in this sentence appears to disconfirm Thompson's view that the *presuppositions* that a speaker has about the hearer's shared knowledge, contributes to the postulation of the underlying structure of RCs (cf. Chapter 2, section 2.2.2.2). In the above sentence the action expressed in the RC could never precede that of the main clause no matter what presuppositions the speaker has about the hearer's knowledge.

- 11) See Chapter 2, section 2.2.2.1.
- 12) McCloskey (1979:36).
- 13) See Chapter 2, section 2.1.3 as well as Kuno (1976).

CONCLUSION

- 1) Bach (1981:79).

A P P E N D I C E S

APPENDIX 1 - The Aims of Empirical Science

(Text reference - concluding paragraph 1.4.9.1, p.37)

1.1 Introduction

Philosophers of science differ in opinion with respect to what constitutes the goals of science. Nevertheless, there is agreement on a number of fundamental points. Botha summarizes these points as follows:¹

"Scientific inquiry does not aim at a mere recording of particular occurrences or events in the world of our experience. Its aim is the discovery of regularities in the flux of these events. Thus it aims at providing laws and theories for the description, explanation, prediction and postdiction of these events.

Furthermore, the knowledge obtained by empirical science must possess a reliable nature. That is to say that the claims made by empirical science are to be open IN PRINCIPLE to testing by any competent scientist. Expressed in different terms, empirical science aims at making statements that are susceptible to confirmation or disconfirmation."

With respect to the overall structure of empirical science there appears to be no general agreement on the number of phases or stages that should be distinguished in a scientific inquiry. The views outlined in the succeeding paragraphs are essentially those of Northrop² who distinguishes three successive stages in scientific inquiry, namely:

1. *The analysis of the problem*
2. *The natural history stage*
3. *The stage of deductively formulated theory*

Northrop recognizes that the most difficult portion of any

inquiry is its initiation.³

"One may have the most rigorous of methods during the later stages of investigation, but if a false or superficial beginning has been made, rigor later on will never retrieve the situation."

He further states,⁴

"This capacity to find the heart of the problem to which the well-known methods are to be applied is a part of inquiry that must precede the actual understanding or application of the methods. It is what comes at the beginning which is the key to success, since it is the effectiveness with which one initiates inquiry that directs one to the key facts and designates the appropriate methods."

Opinions differ on what specific procedure should be followed at the very onset of inquiry, but Northrop notes one prescription which is common to all the authorities referred to in his investigation, and that is the rejection of traditional beliefs. He states,⁵

"One must reject them because there is a problem. There would be no problem were the traditional beliefs adequate. It is precisely because there is a problem and because inquiry does not arise or become inescapable unless there is a problem. And the presence of a problem means that traditional answers are inadequate or at the very least that their inadequacy is in question. To take them for granted when their very adequacy is at issue would be to beg the question."

He then expresses the important view that,⁶

"...at the initiation of inquiry one must question every traditional belief."

What follows is an outline of the methodological principles used in each of the three stages distinguished by Northrop.

1.2 The analysis of the problem

The first stage of inquiry is governed by a rule whereby "*the problematic situation must be reduced to the relevant factual situation.*"⁷ The identification of the root or essence of the problem provides the criterion for selecting out of the infinite number of facts in the world the few that are relevant.

This stage of inquiry ends when the analysis of the problem has designated the facts which must be known in order to resolve the problem.

1.3 The natural history stage

The task of this second stage of inquiry is to inspect the facts designated by the analysis in the first stage of inquiry. The appropriate methods for this 'inspection' are, according to Northrop, the Baconian inductive methods of observation, description and classification.⁸

"The second stage of inquiry comes to an end when the facts designated by the analysis of the problem in the first stage are immediately apprehended by observation, expressed in terms of concepts with carefully controlled denotative meanings by description, and systematized by classification. The important thing to note is that the second stage of inquiry begins with immediately apprehended fact and ends with described fact."

Descriptions in this stage, which are based on the princi-

ple of *induction*,⁹ are known as pretheoretical descriptions. A scientific inquiry which terminates in this stage is therefore pretheoretical in nature.

1.4 The stage of deductively formulated theory

This stage consists of two interconnected phases: *the construction of deductive theories* and *the subsequent testing of theories*. Northrop characterizes this stage as follows:¹⁰

"The basic assumptions or postulates of this [deductively formulated---GP] system designate unambiguously what is proposed to exist. To this proposal or hypothesis, formal logic is then applied to deduce theorems or consequences. Among these consequences one seeks for certain theorems which define experiments that can be performed."

He continues:¹¹

"The experiment designated by the theorem or theorems of the theory is then performed. If in all instances the experiment gives the result called for by the theorems, then the hypothesis is said to be confirmed and the entities and relations designated by it are said to exist. If the experimental result is negative, the hypothesis or postulate set is known to be false and some alternative hypothesis suggested by the data of the second stage of the inquiry, is put in its place and subjected to the same procedure."

1.4 'Adequacy', 'Convergence' and 'Insightfulness'

Even though the methodological principles used in the above three stages are generally recognized as being essential

for a complete scientific inquiry, Langacker notes that there is no theory that can ever be completely adequate:¹²

"Given the limitations of our present knowledge of language structure, it is never possible to claim with full assurance that a proposed set of rules is totally correct or that it handles the data in the most revealing way conceivable.

He goes on to say,¹³

"...linguists are dealing not with theories that are totally right or totally wrong but rather with a continuous scale on which some theories are more nearly adequate than others."

Langacker then poses the question:¹⁴

"Granted that no present theory can possibly give a fully adequate account of the structure of a language, how does one go about determining whether a proposed theory is at least on the right track?"

He recognizes numerous factors which come into play in the evaluation of a proposed analysis. These factors are categorized under three headings, namely: *Adequacy, Convergence and Insightfulness*.

Adequacy - Two types of 'adequacy' may be distinguished: 'Internal adequacy' and 'external adequacy'. The former type refers to the 'compatibility of a theory with the data it purports to describe'. The latter type refers to a theory's "compatibility with other facts and theories."¹⁵

Convergence - As Langacker notes, a linguist can often conceive of several alternative ways of accounting for the facts, but he always looks for an analysis which is favoured by the convergence of several different kinds of evidence.

A powerful criterion for choosing among alternative analyses concerns the notion 'independent motivation'. He characterizes the nature of this notion as follows:¹⁶

"Faced with a choice between two analyses that account equally well for a given body of data, a linguist will not hesitate to choose the one that involves rules and underlying representations that are independently motivated by virtue of helping to account for other data."

Insightfulness - The key notions of an insightful analyses, according to Langacker, are *regularity*, *generality*, *simplicity* and *significance*.¹⁷

"Perhaps we can say that an insightful analysis is one that discerns a regular pattern in a mass of seemingly disparate facts, one that shows apparent idiosyncracies to follow from general principles, one that accounts for a great deal of data by means of a few simple statements, one that captures significant generalizations - or better yet, one that does all these things simultaneously."

The three factors outlined above, which do not feature in taxonomic grammars, clearly play an important role in *motivating* or assessing the merits and adequacy of an analysis. They would therefore be considered significant factors in the development of arguments in support of a theory of relativization.

APPENDIX 2 - Issues in Core Grammar

(Text references - concluding paragraph 0.1,p.9; 2.3,p.61; p.229)

2.1 Introduction

In this appendix a survey is presented of significant aspects relating to the organization and structure of Core Grammar, which has dominated the linguistic scene in the past few years. My objective in this appendix is not to discuss the merits and/or demerits of this theory, but rather to present a possible framework within which a formal grammar of Zulu relativization may ultimately be constructed. Any evaluation of Core Grammar is left to the concluding section of Part 2, namely Prolegomena to a theory of Zulu Relativization within Core Grammar, on page 229

Before an outline of Core Grammar is presented, I wish to reflect on two fundamental assumptions that have guided the transformational generative framework from its inception in the '50s right up until the present day. These assumptions concern:

- (i) empirical knowledge about language, and
- (ii) the linguistic knowledge of a speaker.

2.2 Two fundamental assumptions that underlie the formal theory

2.2.1 On empirical knowledge about language

In terms of this assumption, empirical knowledge about *language* or *linguistic structure* can, "only be sought in the framework of a particular well-defined linguistic

theory or model,"¹ in other words, empirical knowledge about *language* or for that matter *a language* presupposes *a linguistic theory*.

The relation that exists between a grammar (i.e. empirical knowledge about a language) and a linguistic theory (i.e. empirical knowledge about *language*) is characterized by Chomsky as follows:²

"The grammar of a particular language, then, is to be supplemented by a universal grammar that accommodates the creative aspect of language use and expresses the deep-seated regularities which, being universal, are omitted from the grammar itself. Therefore it is quite proper for a grammar to discuss only exceptions and irregularities in any detail. It is only when supplemented by a universal grammar that the grammar of a language provides a full account of the speaker-hearer's competence."

2.2.2 On the linguistic knowledge of a speaker

Two complementary aspects of the linguistic knowledge of a speaker are recognized, namely:

- (a) His *competence* - by this is meant a speaker's implicit knowledge of his own language, and
- (b) His *faculté de langage* - by this is meant the innate knowledge or language learning abilities that a human being is born with, i.e. the innate mental structure pertinent to language acquisition.

Competence - On the question of competence Botha states,³

"The linguistic competence or knowledge of the fluent native speaker is manifested in his ability to produce a sentence of his

language on the appropriate occasion and to understand an arbitrary sentence on a given occasion."

He goes on to say,⁴

A transformational grammar aims at accounting for the linguistic competence of the fluent native speaker."

It is hypothesized that this competence is present in the speaker in the form of an *internalized grammar*, i.e. a system of rules by which the speaker relates sound and meaning in a certain specific way.

A fundamental notion in generative grammar and one regarded by transformationalists as being of paramount importance with regard to the linguistic competence of a fluent native speaker is the so-called *creativity of language* (or alternatively, the *creative aspect of language*).⁵ As Botha notes, the *creativity of language*:⁶

"... accounts for the native speaker's ability to produce, in principle, an infinite number of new sentences and for his ability to interpret on given occasions, such new sentences."

Three creative processes have been distinguished in terms of which a fluent speaker commands the infinite set of sentences of his language. They are:

- (i) *conjunction*,
- (ii) *relativization*,
- (iii) *complementation*

Interestingly enough traditional grammarians clearly understood the creative aspect of languages, but unfortu-

nately the technical devices for expressing a system of recursive processes were not available to them. Hendrikse observes that,⁷

"It was only with the development of the notion "recursivity" in mathematical theory that the formal apparatus for expressing the creative processes of language was made available to the general linguistic theory."

By means of the notion *recursivity* it is possible to account for the occurrence of an infinite set of sentences in a language, where only a finite set of elements and a finite set of rules obtain.⁸

Faculté de langage - As already noted, *faculté de langage* refers to the innate knowledge or language learning abilities that a human being is born with. It is assumed that these abilities enable a child to internalize a grammar of his own - in other words, it is assumed that unless the child already had a knowledge of language in some sense, he could not have learned his own particular language. In this regard Chomsky states,⁹

"A theory of linguistic structure that aims for explanatory adequacy incorporates an account of linguistic universals, and it attributes tacit knowledge of these universals to the child. It proposes, then, that the child approaches the data with the presumption that they are drawn from a language of a certain antecedently well-defined type, his problem being to determine which of the (humanly) possible languages is that of the community in which he is placed."

He continues,¹⁰

"For the present we cannot come at all close to making a hypothesis about innate schemata that is rich, detailed, and specific enough

to account for the fact of language acquisition. Consequently, the main task of linguistic theory must be to develop an account of linguistic universals that, on the one hand, will not be falsified by the actual diversity of languages and, on the other, will be sufficiently rich and explicit to account for the rapidity and uniformity of language learning, and the remarkable complexity and range of the generative grammars that are the product of language learning. The study of linguistic universals is the study of the properties of any generative grammar for a natural language."

Two types of universals are currently distinguished by linguists working within the framework of transformational theory, namely:¹¹

- (a) *substantive universals*
- (b) *formal universals*

By *substantive universals* is meant that "items of a particular kind in any language must be drawn from a fixed class"¹² Thus, the phonetic features of sounds, and syntactic categories such as Noun, Verb etc. are instances of this category of universals.

Formal universals are of a more abstract sort and refer to certain specified formal conditions that must be met by the grammar of every language. These universals are concerned with the different components of a linguistic grammar and the rules operative within them. Thus, for example, the *syntactic component*, *semantic component* and *phonological component* may be regarded as instances of formal universals.

2.3 The organization of Core Grammar¹³

2.4 Introduction

The organization of Core Grammar may be schematically represented as follows:¹⁴

1. Base rules
2. Transformational rules

-
- | | |
|-----------------------------------|---------------------------|
| 3a. Deletion rules | 3b. Construal rules |
| 4a. Filters | 4b. Interpretive rules |
| 5a. Phonological rules | 5b. Conditions on binding |
| 6a. Stylistic rules ¹⁵ | |

The base rules (1) together with the transformational rules (2) form the syntax of a core grammar. The rules of the base, generate base structures which are converted to surface structures by the transformational rules.

(3a), (4a), (5a) and (6a) apply to the structures generated by the transformations and produce the final phonetic representations.

(3b), (4b) and (5b) also apply to the output resulting from the application of transformational rules but these rules finally produce representations in logical form (LF).

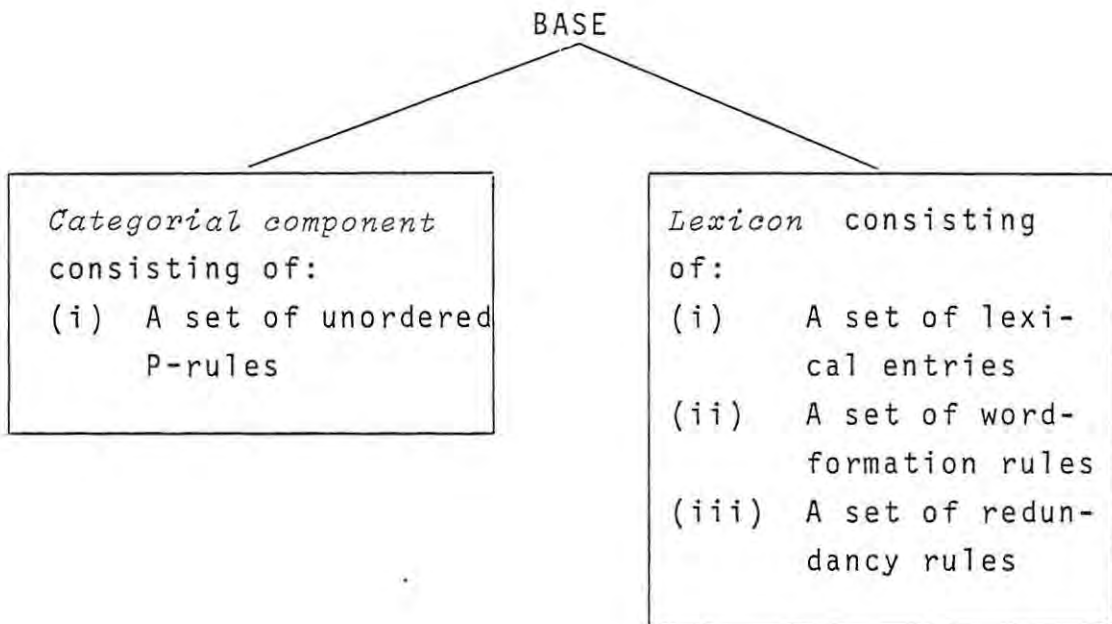
On the notion, *logical form*, Chomsky says:¹⁶

"I use the latter term to refer to those aspects of semantic representation that are strictly determined by grammar, abstracted from other cognitive systems."

2.5 The syntax of a Core Grammar

2.5.1 The base

The base consists of 2 sub-divisions represented schematically as follows:



Significant characteristics of the base may be summarized as follows:

2.5.1.1 The categorial component

- (i) The categorial component of the base is a context-free grammar which generates an infinite class of abstract phrase markers.
- (ii) It is assumed that all derivations begin with the following rule:

$$1. \bar{S} \longrightarrow \text{COMP } S$$

COMP is a category which incorporates sentence-introducers such as the English *for*, *that*, *whether*. These are referred to as *complementizers*.

- (iii) The structure of P-rules is confined to one or other version of the X-theory.
- (iv) The P-rules are optional and unordered with respect to one another. Assuming the notation of labelled bracketing, the following base convention is stipu-

lated:

If the category α is not expanded in a derivation, then apply the following rule, where e is the identity element:

$$2. [\alpha] \longrightarrow [\alpha e]$$

2.5.1.2 The lexicon¹⁷

- (i) As noted above the output of the phrase structure rules is a set of abstract phrase markers. These are filled with items from the lexicon, each with its phonological, semantic and syntactic properties.
- (ii) The items are inserted by means of lexical transformations and the result is referred to as a base phrase marker.¹⁸

The adoption of a theory of core grammar has brought about no changes in lexical insertion or the mechanisms and internal organization of the lexicon. However, it should be noted that Chomsky and Lasnik do indicate that there is little reason to suppose that lexical items are inserted in base structures in the theory:¹⁹

"...everything we say can be translated into an alternative theory in which lexical insertion takes place in surface structure and only abstract features are generated in the base (which is now limited to the categorial component) in positions to be filled by lexical items."

2.5.2 Transformational Rules

The output of the base provides the input for the T-rules which, when applied, yield *Surface Structures*. The T-rules

of a core grammar differ in important respects from the *traditional*²⁰ transformational rules. The differences relate to type, formation, as well as conditions of application. The following important properties of the transformational component are generally assumed:

- (i) Transformations apply to P-markers and have as output P-markers as well; in other words a transformation is a rule that maps one P-marker into another.
- (ii) Two parts of a transformational rule are distinguished:
 - (a) *A structural description* in which a specification is given of the P-markers to which the rule applies
 - (b) *A structural change* specifying the change that results when a transformation is applied to a P-marker.
- (iii) In traditional generative grammars, T-rules incorporated a sub-class of deletion rules. In core grammar T-rules exclude deletion rules. The latter represent a separate class of rules altogether.
- (iv) The operations are restricted to movement, left- and right-adjunction, and substitution of a designated element.

The NP movement rule, namely *Move NP* is an example of a substitution rule, whereas the *wh*-movement rule, namely *Move wh-phrase* is an example of an adjunction rule: a *wh*-phrase is affixed by adjunction to COMP. It should be noted, however, that both these rules are at the same time *movement* rules, since in the former an *NP* is moved and in the latter, a *wh*-phrase.

- (v) Transformational rules are unordered and optional and severe restrictions are placed on contextual dependencies. With respect to the latter, Chomsky affirms that the structural description of a transformation may be represented as a sequence such as 3 below, where α is one of the following: a terminal string, a category, or a variable.

3. SD : $(\alpha_1, \dots, \alpha_n)$

By placing this restriction on the SDs of T-rules, a great variety of contextual dependencies, earlier specified in generative grammars, are now excluded. Chomsky restricts the structure of T-rules even further. According to him the T-rules of a core grammar are restricted to two types:

- (a) *minor movement* or *local* rules (as defined by Emonds)²¹
- (b) the rule '*Move* α ' where α is a category.

Due to the fact that all T-rules of a core grammar are as stipulated in (i) and (ii) above, it follows that no more than one element of the context within which a structural change takes place may be specified. In addition the element that is specified must satisfy the requirements set out in Emonds' definition of a 'local rule'.

- (vi) All T-rules of the type *Move* α are subject to the principles of trace theory. In terms of this theory, a movement rule that moves category α leaves a category $[\alpha_e]$ behind. $[\alpha_e]$ is then the trace of the moved category α . An explicit formulation for this theory is offered by Chomsky as follows:²²

"...when a transformation moves a phrase P from position X to position Y it leaves in position X a trace bound by P;

Chomsky explains the notion of *binding* in his discussion²³ of the interpretation of a noun in a sentence such as the following:

4. *John lost his way*

In this sentence *John* and *his* refer to the same entity; in effect the NP *John* fixes or determines the reference of the NP *his*. The former NP, i.e. *John* is said to bind the latter one, i.e. *his*.

According to Chomsky:²⁴

"The relation of an NP to its trace is naturally construed as, in effect, a relation of bound anaphora analogous to the relation between *John* and *his*..."

The binding noun phrase, i.e. *John* in the above example, is referred to as a *quantifier* and the trace contained in the bound noun phrase, i.e. *his*, a *variable*. The trace must in one way or another be bound to the specific category that is moved. A movement rule shows this phenomenon by assigning identical indexes to the moved category and its trace. A trace, then, is just an indexed category with no lexical content, a phonetically null category.

- (vii) Chomsky claims that with the exception of the NP movement rule, all rules of the type *Move α* are adjunctions. A common example of an adjunction rule is the so-called *wh-movement rule* stated simply as follows:

5. *Move wh-phrase*

This rule always moves a *wh*-phrase into COMP, to the *left* of the complementizer in English. That 5 executes adjunction is not specified in the rule itself. It is instead specified in a general theory, known as the 'landing site' theory which is discussed in Table 1.²⁵ Rule 5 can be clarified by referring to the following underlying structure:

$$6. \quad [\bar{S}[\text{COMP} \pm \text{WH}][\text{S} \dots [\text{wh-phrase}] \dots]]$$

If 5 is applied to 6 then according to the principles of the trace and landing site theories, 7 below is produced:

$$7. \quad [\bar{S}[\text{COMP}[\alpha_i \text{ wh-phrase}][\text{COMP} \pm \text{WH}][\text{S} \dots [\alpha_i e] \dots]]^{26}$$

$[\alpha_i e]$ is the trace of the moved *wh*-phrase

2.5.2.1 Conditions on the application of T-rules

Specific conditions are no longer built into the individual T-rules themselves, and thus their expressive power is restricted. This potentially results in a tendency for the rules to overgenerate - or more generally, to misgenerate. In order to compensate for the lack of expressive power of the rules, certain general conditions on T-rule application are introduced. Important aspects relating to these conditions may be tabulated as follows:

TABLE 1 - CONDITIONS ON T-RULES

CONDITION	CHARACTERIZATION ¹	OPERATIONS AFFECTED	EXAMPLES ²
1. Landing site	Ensures that a moved category is affixed in the <i>correct</i> position in a structure	adjunction -e.g. <i>wh</i> -moved to the <i>left</i> of COMP	1a) [_S [COMP ± WH][_S ...[<i>wh</i> -phrase]...]] ⇒ 1b) [_S [COMP[_{α₁} <i>wh</i> -phrase][COMP ± WH]] [_S ...[_{α₁} e]...]] 1c)*The man who that I saw 1d)*The man that who I saw
2. Recoverability	No lexical material may be deleted from a sentence structure	substitution	2a) NP(it) be A[_S { for } that } S] +WH 2b) It is illegal for John to take part 2c) *John is illegal to take part i.e. (<u>it</u> cannot be deleted)
3. A-over-A	If a T-rule applies to a structure of the form [_α ...[A...]]... where α is a cyclic node, then it must so be interpreted as to apply to the maximal phrase of the type A	all	3a) [_S [_S [NP _e][VP was[AP en[VP [V hit]NP[NP Bill]]and[NP John]]]]]]]] 3b) Bill and John were hit 3c) *Bill was hit and John 3d) *John was hit Bill and

¹In certain instances no explicit formulation has been provided in the literature. In such cases characterization regarding the effect of the relevant condition is set out.

²The (a) sentences indicate approximate underlying structures. The asterisk indicates examples of sentences which result if the relevant condition is not applied.

TABLE 1 - Contd

CONDITION	CHARACTERIZATION	OPERATIONS AFFECTED	EXAMPLES
4. Subjacency	In the structure ... X ...[_α ...[_β ... <u>Y</u> ...]...] ...X ... no rule may move a phrase from position Y to position X, or con- versely, where α and β are binding ³ categories	all	4a) [_S [COMP[_S [_{NP} your interest [_{WH} in whom]] surprised him]] 4b) Your interest in whom sur- prised him? 4c) *In whom did your interest surprise him?
5. Structure- preserving ⁴	A transformation T is <i>structure preserving</i> if, and only if, given a phrase-marker PM such that it contains two nodes B and C which both belong to the category X, an application of this rule T to this phrase-marker PM has the effect of substituting for C the node B together with all the material dominated by B	all (except local and root transformations) ⁵	5a) [_S COMP][_S [_{NP} beavers] be-en- build dams by [_{NP} e]] 5b) [_S COMP][_S [_{NP} t] be-en-build dams by [_{NP} beavers]] ⁶

³This term is discussed in 2.3.7.

⁴The status of this condition within a core grammar is not quite clear. It does not appear to be necessary to specify this condition for certain T-rules. As Chomsky (1980a:4) notes:

"It follows that NP-movement *must be structure preserving* in the sense of Edmonds (1976) if well-formed representations in LF are to be generated, unless there is some rule of interpretation that converts the surface structure into an appropriate representation in LF." (Italics---GP)

⁵A root transformation is a transformation that "does not apply to embedded sentences, but only to the full sentence structure" (Chomsky 1976:84). An example in English is the rule that forms yes-no questions such as: *Is the man who is tall here?* In this sentence the verb *is* of the main clause has been moved into initial position.

⁶Here the rule NP-postposing has applied. A further rule of NP-preposing produces the surface form [_S dams are]_{VP} built t by beavers]].

With respect to the conditions outlined in Table 1, the following points may be made concerning the differences that exist between traditional generative grammars and a core grammar:

- (i) Some conditions on the application of traditional T-rules have now become sub-parts of more general conditions. Others no longer apply to T-rules but to other components of the grammar. These differences may be tabulated as follows:

TABLE 2 - DIFFERENCES IN CONDITIONS ON T-RULES

Traditional	Core Grammar
1) Island Constraints	Have become sub-parts of the subjacency condition
2a) Tensed-S Condition b) Specified Subject Condition	No longer conditions on the application of T-rules. Have become restrictions of LF and are replaced by the Nominative Island Constraint (NIC) and opacity conditions respectively.
3) Strict Cycle Condition	Possibly accounted for by other principles of the grammar. No longer necessarily specified as a condition.

2.6 The Surface Structures of a Core Grammar

The surface structures generated in a core grammar differ in a number of respects from traditional surface structures.

The reasons for these differences may be tabulated as follows:

TABLE 3 - DIFFERENCES IN SS's

Traditional	Core Grammar
<p>1) Deletion rules are included in T-rules. SS's thus reflect the effect of deletions e.g. SS: <i>I think John left (that is deleted by a T-rule from: I think that John left.)</i></p>	<p>Deletion rules are <i>not</i> included in T-rules: thus no effect of deletions is reflected in the derivation of SS's e.g. SS: I think[\bar{S} [COMP that] [\bar{S} John left]. Deletion rules apply to SS's only</p>
<p>2) No traces in SS's e.g. SS:[\bar{S} NP John] seems [\bar{S} to like Bill]</p>	<p>Traces present in SS's. The moved category leaves a trace behind that is coindexed with the moved category, e.g. SS:[\bar{S} [NP₁ John] seems [\bar{S} [NP₁ e] to like Bill]</p>

2.7 The derivation of representations in universal phonetics

As noted in 2.4, deletion rules, filters, phonological and stylistic rules apply to the structures generated by transformations i.e. Surface Structures, to produce representations in terms of a universal phonetic system provided by UG. In the paragraphs that follow important properties of each of the abovementioned rules are singled out and discussed.

2.7.1 Deletion rules

- (i) Chomsky and Lasnik state that by the term deletion is meant the deletion of a category and its contents.²⁷
- (ii) The deletion rules of a core grammar are subject to two general conditions:
- (a) the recoverability condition
 - (b) the A-over-A condition

The effect of both these conditions can be illustrated with reference to the rule of free deletion in COMP which is formulated as follows:²⁸

"In the domain COMP, delete [$\alpha\varphi$], where α is an arbitrary category and φ an arbitrary structure."

If this rule applies to a structure such as 8 then any of the strings in 9 may be derived:

8. *the man [_{COMP} who that] I saw
- 9.1 *the man who that I saw
- 9.2 the man that I saw
- 9.3 the man who I saw
- 9.4 the man I saw

The recoverability condition specifies, inter alia, that items from the lexicon cannot be deleted unless they are explicitly mentioned in the deletion rule. So, for example, the application of the free deletion in COMP rule is blocked by the above condition in structures such as the following:

- 10.1 *[_COMP[to whom] [for]]

10.2 *_{COMP} [pictures of whom] [that]]

Deletion of the whole *wh*-phrase in these examples would in effect involve deletion of the lexical items *to* and *pictures of* in 10.1 and 10.2 respectively.

The recoverability condition itself, however, has been shown to be inadequate since the *wh*-word cannot always be deleted, for example, in direct and indirect questions, thus:

11.1 I wonder what he saw t
cf.*I wonder he saw t

11.2 What did he see t?
cf.*Did he see t?

In this regard Chomsky & Lasnik show that *wh*-words in questions have *semantic content*, while the *wh*-words in relative *sentences* have *no semantic content*.²⁹

The condition need therefore be reformulated to permit the deletion of *wh*-words in relative sentences, and at the same time block the deletion of *wh*-words in questions. It must therefore hold not only for lexical items, but also for items that have semantic content.

The A-over-A condition also applies to deletion rules. For example, in a structure such as 10.2 above, the A-over-A condition would block the application of the rule of free deletion in COMP, since *whom* taken as a member of a category α , is included in larger elements of some category, namely *pictures of whom*.

- (iii) The theory of core grammar precludes the formulation of any rule-specific conditions on deletions. So, for example, no condition can be placed on the rule

of free deletion in COMP. An ungrammatical sentence such as 12 must therefore be blocked in some other way in the grammar. This is done by the implementation of *filters* which are discussed in 2.7.2.

12. *The man who that I saw

(iv) Four types of deletion are permissible in a core grammar:

- (a) Free deletion in a specified domain, e.g. the rule of free deletion in COMP;
- (b) Deletion of a specified category, e.g. subject deletion in Spanish, e.g. *quién tú creiste que [NP^e] vio a Juan > quién creiste que vio a Juan?*³⁰
- (c) Deletion of a specified item, e.g. the Equi-NP deletion where *X-self* is deleted in the context *for ... to*:

13. I want for *X-self* to win the race > I want to win the race

- (d) Deletion under identity.

Two types are hereunder recognized:

- (i) Deletions that are subject to the principle of subjacency. Compare, for example, the grammaticality of sentence 14.1 with the ungrammaticality of 14.2.

14.1 John went more often to Paris than Bill to London

14.2 *John went more often to Paris than I think Bill to London

The identical verb *went* in the second part of the comparative sentence 14.2 is blocked by the node S dominating the clause *I think*.

(ii) Deletions that are free of all rule conditions.

15.1 John has some friends and I believe your claim that Bill has some...too

15.2 I don't think Bill will win but I know a woman who does...

Deletion of elements in each of these two sentences appears to take place across two S-nodes.

Chomsky discusses the possibility that the occurrence of deletion under identity falls outside the domain of sentence grammar (or at least in part). If this is so then naturally no provision need be made for this type of deletion in a core grammar.³¹

(v) Deletion rules differ from the T-rules of a core grammar in at least one important respect: The former rules *may* be *obligatory* whereas the latter are not all *optional*.

Chomsky argues, for example, that the rule of free deletion in COMP is obligatory³² in a specified context, namely in the environment of an infinitive complement.³³ In other words this rule is not optional in all cases.

(vi) The conditions on contextual dependencies specified for T-rules apply also to deletion rules. In other words, not more than one element of the context within which a deletion takes place may be specified. If such an element is specified, then the rule must be specified as a local rule.

2.7.2 Filters

As already noted the T-rules of a core grammar are optional and unordered and there are strict conditions on the contextual dependencies that are specified for such rules. These facts imply in effect that the syntactic component of such a grammar overgenerates. In other words, many sentences which are not well-formed are also generated by the syntactic component of a core grammar.

In earlier versions of generative grammar, it was the obligatory and ordered nature of T-rules as well as the contextual dependencies specified by them, which blocked the formation of sentences that were not well-formed. In a core grammar other mechanisms need be adopted to achieve this goal. One such mechanism relates to conditions which all well-formed SS's must satisfy. These conditions are specified in the form of so-called (surface) filters.

Thus '(surface) filters' have been introduced in the grammar as a device to simplify and restrict the theory of transformations. On this note and with reference to COMP Chomsky and Lasnik state that:³⁴

"It is evident...that the distributional properties of elements that appear in COMP (*wh*-phrases and complementizers) are rather complex. It would, in fact, require a fairly extensive use of ordering, obligatoriness, and contextual dependencies to state these properties in the rule system. Furthermore, to our knowledge there is no strong argument in favor of any of these devices apart from the properties of the complementizer system. If this is correct, it would obviously be a mistake to enrich the theory of transformations to allow for such devices, thus vastly increasing the class of possible grammars. Rather, the theory of transformations should exclude such devices, and means should be provided in the theory of

grammar to achieve their effect in the particular case of complementizers. We have been suggesting that the theory of filters is the appropriate device. Every case that we have so far discussed involves complementizers in one way or another. We might explore the possibility that this is a general property of the system of surface filters. So conceived, surface filters are a device for expressing properties of the complementizer system."

Chomsky and Lasnik state that filters have the following general form:³⁵

16. " $[\alpha \varphi_1, \dots, \varphi_n]$, unless C, where
- (a) α is either a category or is left unspecified
 - (b) φ_i is either a category or a terminal symbol
 - (c) C is some condition on $(\alpha, \varphi_1, \dots, \varphi_n)$ "

Where α is specified, the filter applies in the domain α . If unspecified the bracketed construction is arbitrary, in other words, the filter applies to any string $\varphi_1^1 \dots \varphi_n$. The condition C need not be placed on $(\alpha, \varphi_1, \dots, \varphi_n)$. They go on to say,³⁶

"Note that we have not had to resort to variables among the φ_1 's. That is to say, the filters are "local" in the sense that they consider only the properties of some continuous construction. Thus we might think of them, in effect, as templates that must be satisfied by surface structures to which deletion rules have applied."

The characteristic properties of some of the filters generally entertained in core grammar are outlined below:

TABLE 4 - FILTERS

Filter	Effect
1)*[_{COMP} <i>wh</i> -phrase complementizer]	1a)*the man who that I saw 1b) cf: the man that I saw
2)*[_{NP} NP tense VP]	2a)*the man met you 2b) cf: the man who met you
3)*[_{α} NP to VP] unless α is adjacent to and in the domain ¹ of a verb or <i>for</i>	3a)*We want very much Bill to win 3b) cf: We want Bill to win
4)*[_{\bar{S}} that + WH[_{NP^e}] ...] unless \bar{S} or its trace is in the context: [NP-...]	4a)*who do you think that saw Bill 4b) cf: the man that saw Bill
5)*[V adjunct NP], NP lexical ²	5a)*I believe sincerely John 5b) cf: I believe John

¹The notion *domain* as well as a related notion *c-command* are explicated by Chomsky and Lasnik (1977:459) in the following quotation:

"We say that α c-commands β if the first branching category dominating α dominates β ; in this case, β is in the *domain* of α ."

²This filter does not involve the COMP system in any way and is in this respect different from the others. Filter (3) indirectly involves properties of COMP since at least one element in COMP must occur when COMP is followed by the construction [_{NP}NP tense VP]

2.7.2.1 Filters and transformations

Filters are subject to the same analyzable conditions as transformations. In other words, if a filter were to have a structural description identical to that of a particular transformation, then the structural descriptions of both would be satisfied under the very same circumstances. Thus, for example, the A-over-A condition may apply to filters as well as to transformations. The differences that exist between transformations and filters may be outlined as follows:

TABLE 5 - DIFFERENCES BETWEEN T-RULES AND FILTERS

Transformations	Filters
1) T-rules are optional	Filters are obligatory
2) At the most 2 categories may be specified in the SD of a T-rule (subject to the conditions of the definition of 'local rule')	More than 2 categories may be specified
3) The structural change of a T-rule can embrace a great diversity of operations, inter alia, the movement of a category and the replacement of one category by another	The structural change of a filter is restricted to the assignment of * only

2.7.2.2 Filters and Traces

With reference to the application of filters, *traces* of NPs behave in the same manner as *lexical* NPs i.e. NPs that dominate lexical material. Thus, for example, filter (3) would apply to a construction such as the following where *t* is the trace of an NP:

17. *Who is John eager [t to win]

Filters, however, ignore PRO, i.e. an [_{NP}e] that is generated in the base. Such an element is subject to rules of control, which are discussed in 2.8.1.2.

2.7.2.3 Filters and Deletion Rules

The application of filters with respect to deletion rules is ordered in a core grammar:

Filters apply *after* deletion rules. This can be illustrated in the following example:

18. It is illegal [for John to take part].

The rule of free deletion in COMP deletes *for* in

18 resulting in:

19. *It is illegal [John to take part]

19 is now blocked by filter (3). If the filter applied to 18 before the deletion rule, then the ungrammatical sentence 19 would be derived in the grammar.

2.7.2.4 Justification for a theory of filters in a Core Grammar

Chomsky and Lasnik attempt to justify the accommodation of a theory of filters in a core grammar by stating that there appear to be functional considerations relating to them.³⁷

"Filters seem to be designed to permit grammatical outputs corresponding to 'reasonable' base structures, and they regularly restrict the association of deep and surface structures, often to biuniqueness."

Chomsky and Lasnik expand on their use of the word *reasonable* by stating that,³⁸

"... filters seem to have the property that at least some outcome is possible for any "reasonable" base-generated structure; roughly, there is a way to say whatever is worth saying."

On the question of biuniqueness they state that,³⁹

"... it seems reasonable to assume that a one-one association of deep and surface structures will be optimal for language processing."

Their observations may be illustrated by looking first at the following base structure:

20. *a topic [_{COMP} for] [_S Bill to work on which]

If *wh*-movement is applied to 20 the following possible structures are derived:

21. *a topic [_{COMP} on which for] [_S Bill to work t]

22. *a topic [_{COMP} which for] [_S Bill to work on t]

In 21 the PP *on which* has been moved to COMP whereas in 22 only the NP *which* has been moved.

The application of the rule of free deletion in COMP on 21 produces the following 4 possible derivations:

23.1 *a topic [COMP on which for][_S Bill to work t]

23.2 *a topic [COMP for] [_S Bill to work t]

23.3 *a topic [COMP on which] [_S Bill to work t]

23.4 *a topic [COMP e] [_S Bill to work t]

Application now of the same rule to 22 produces the following 4 possibilities:

24.1 *a topic [COMP which for] [_S Bill to work on t]

24.2 a topic [COMP for] [_S Bill to work on t]

24.3 *a topic [COMP which][_S Bill to work on t]

24.4 *a topic [COMP e] [_S Bill to work on t]

There are therefore eight potential surface structures that may be associated with the base structure. However, the application of filters effects the exclusion of a number of these potential surface structures. For example 23.1 and 24.1 are excluded by filter (1). In both cases a *wh*-phrase occurs together with a COMP; 23.3, 23.4, 24.3 and 24.4 are all excluded by filter (3). 23.2 is excluded by the recoverability condition since the lexical item *on* is deleted.

Therefore 24.2 remains as the only grammatical surface structure. Thus in the above sentences the filters operate in such a manner that at least one surface structure can be

associated with the base structure 20.

In Chomsky and Lasnik's terms then, one may say that 20 represents a 'reasonable' base structure. The examples also illustrate the point that filters restrict the association between base structures and surface structures. In this instance the association is restricted to biuniqueness, i.e. only one surface structure is associated with one deep structure. This latter property is highly valued by Chomsky and Lasnik who state that,⁴⁰

"A language would be well-designed if there were not too many ways of associating deep and surface structures."

On the nature of filters Chomsky and Lasnik also make the following important observations (with reference to infinitival constructions in English):⁴¹

"As we have mentioned, it seems reasonable to assume that a one-one association of deep and surface structures will be optimal for language processing. Thus considerations involving the embedding of grammar in performance systems may provide a functional explanation for the fact that many dialects have evolved these filters. It is also possible that these filters constitute the 'unmarked case' when the language permits the full range of base-generated infinitival constructions, as modern English does ... If so, then the child who discovers, from positive evidence, that the full range of infinitival constructions is permitted would need no negative evidence to inform him that these filters belong to the grammar. Needless to say, these remarks are highly speculative."

With reference to their comment on 'language processing', it is argued that, for example, filter (2) facilitates such a process, in that this filter marks as ungrammatical a formulaive series that is analyzed by perceptual strategies as being incorrect. Filter (2) blocks sentences such as the following:

25.1 *the man met you is my friend

25.2 *he left is a surprise

The perceptual strategy linked with filter (2) is given as follows:⁴²

"In analyzing a construction C, given a structure that can stand as an independent clause, take it to be a main clause of C."

The construction C can be a sentence, a VP, an NP or an AP as indicated below:

26.1 *_S[*he left*] is surprising (C = S)

26.2 I_{VP} think [*he left*] (C = VP)

26.3 [_{NP} the man [*he met*]] is my friend (C = NP)

26.4 *_S[_{NP} *the man was here*] is my friend (C = S)

26.5 I am_{AP} glad[*you were able to come*] (C = AP)

The *italicized* phrase in each of the above sentences is a potential independent clause. In terms of the perceptual strategy set out above each of these phrases is interpreted as a main clause of C.

The strategy succeeds in 26.2, 26.3, and 26.5 but fails in 26.1 and 26.4, namely the cases that are ruled ungrammatical by the filter (2). It may therefore be concluded that there is a functional explanation for filter (2): it facilitates the perceptual strategy set out above by marking as ungrammatical those very formative series that are analyzed

as being incorrect by the perceptual strategy.

2.8 Aspects of Logical Form (LF)

As already noted the rules of the semantic component apply to surface structures. This in effect means that all aspects of meaning determined strictly by sentence grammar, are indicated in the representation in LF

It is assumed furthermore that semantic relations such as Agent, Goal, Instrument etc. (called 'thematic' or 'case' relations in various theories) are determined by the interaction of deep structure configurations and lexical properties.

Under the trace theory of movement rules, surface structures suffice to provide the relevant configurations, carried over by transformations from deep structures. Thus, for example, in a surface structure such as the following; it is clearly indicated that [_{NP1}e] is the trace of the NP *John* by virtue of the fact that they are both assigned the same index. (See 2.8.1.1). The deep structure position of the NP *John* can therefore already be deduced from this surface structure

27. [_{NP} John] is likely[[_{NP1}e] to win

According to Chomsky⁴³ the rules of semantic interpretation⁴⁴ include rules that (i) assign the scope of logical operators such as 'not', 'each', 'who' etc., and fix their meaning; (ii) assign antecedents to such anaphoric expressions as reciprocals, e.g. 'each other', and necessarily bound anaphors such as 'his' in *John lost his way* where 'his' must refer to *John*. Chomsky observes that given the logical

forms generated by sentence grammar, further rules may also apply:⁴⁵

"These further rules of reference determination may involve discourse properties as well, in some manner; and they interact with considerations relating to situation, communicative intention, and the like.

He goes on to say:⁴⁶

"Other semantic rules apply, interacting with rules belonging to other cognitive structures, to form fuller representations of "meaning" (in some sense)."

Chomsky assumes that the LFs for sentences may be obtained by applying certain rules. Thus, for example, the LFs of sentences such as 28.1 and 28.2 may be obtained by applying the rules in 29.

28.1 You told Bill who to visit?

28.2 Who did you tell Bill to visit?

- 29
- (i) Find the place from which *who* moved
 - (ii) Mark this position by X
 - (iii) Interpret *who* as "for which person X", controlling the free variable X
 - (iv) Determine control of the subject of the embedded verb (namely, as the object of the matrix sentence).

The approximate LFs for 28.1 and 28.2 would thus be 30.1 and 30.2 respectively:

30.1 You told Bill for which person X, Bill to visit X

30.2 For which person X, you told Bill, Bill to visit X

2.8.1 Properties of certain rules that derive representations in LF

In this sub-section I wish to present an outline of the properties that characterize some of the rules that play a role in yielding representations in LF. The discussion is restricted to an explication of the different binding conditions as well as the rules of construal and focus, since these appear to be adequately developed in the literature.

2.8.1.1 Rules of construal

These are rules that associate two categories, the one *an antecedent* (e.g. a plural noun phrase) and the other *an anaphor* (e.g. the reciprocal *each other*). The association of the two categories is accomplished by the adoption of the mechanism of *coindexing*. On the question of anaphor, Chomsky states that lexical NPs i.e. NPs that dominate lexical material are not anaphors. [_{α} e], i.e. PRO and traces on the other hand are anaphors.⁴⁷

Languages apparently differ with respect to the status of certain elements. For example, in English the reflexive pronoun is an anaphor while in Japanese and Korean there is evidence that the reflexive is not an anaphor.

The rules of construal include, inter alia:

- (i) Rules of control
- (ii) Rules that assign an antecedent to bound anaphors (e.g. *each other* and reflexives)

2.8.1.2 Rules of control

The rules of control may be tabulated as follows:

TABLE 6 - RULES OF CONTROL

Rule	Effect	Examples
Control : (First rule)	Assigns to the anaphor PRO the index of one of the NPs in the main clause	1a) John persuaded [_{NP₁} Bill] [_S COMP][_{NP₁} e] ² to leave] ([_{NP} e] = PRO) 1b) [_{NP₁} John] promised Bill [_S COMP][_{NP₁} e] to leave] ³
Control : (Second rule) (Associated with the structure: [COMP <i>wh</i> -phrase + WH] [S PRO to V...t...])	No sentence containing the structure [COMP <i>wh</i> -phrase + WH] [S PRO to V...t...] (t is the trace of <i>wh</i> -phrase) is grammatical if another NP is generated as PRO in the embedded subject position	2a) [_{NP₁} John] asked Bill [_S [COMP who + WH] [S PRO ₁ to visit t]] 2b) *John asked Bill who Peter to visit

Notes on this table appear on p.302.

Additional notes on Table 6

- 1) All rules of control are obligatory.
- 2) Rules of control (like other rules of construal) assign indexes to anaphoric elements that do not already have indexes. They do not alter existing indexes. Consider, for example, the following sentences:

31.1 *John persuaded Bill [Tom to leave]

31.2 *Who did John persuade Bill[t to leave]
 [t is the trace of *who*]

In 31.2 *who* has been moved and its trace is left behind namely [_{NP}₁e] where 1 is the index of *who*. The rule of control which is obligatory, can now not apply since [_{NP}e] has already received an index. The result is that 31.2 is a sentence that is not well-formed.

- 3) With respect to sentence (1a) and (1b) it should be noted that verbs such as *persuade* and *promise* are verbs of control. With the verb *persuade* control is exercised by its object NP while with the verb *promise* control is exercised by its subject NP. The rule of control thus assigns indexes in observance of the properties of the matrix verb. With verbs such as *persuade* the rule of control assigns the same index to the anaphor as it does to the *object* NP of the matrix sentence. With verbs such as *promise* the anaphor and the *object* NP of the matrix sentence are assigned the same index. The properties of the matrix verb therefore play an important role in the assignment of *indexes*.

Similarly in (2a) the subject NP *John* controls the embedded subject PRO. Once again the properties of the matrix verb play an important role. With *ask*, for example, control is exercised by its subject NP. The rule of con-

trol assigns to the embedded subject PRO the same index as the subject NP John.

In a sentence such as the following where no lexical NP can be associated with the subject PRO, the second rule of control assigns an arbitrary index *arb* to PRO.

32. It is unclear [_S[_{COMP} who + WH][PRO to visit t]]

Thus an [_{NP}e] that is not coindexed with an antecedent, but which is assigned the index *arb*, is arbitrary in reference.

- i) [_{NP}e] can be the trace of an NP that is moved by a transformation. In such a case _i is the index of the moved NP.
- ii) [_{NP}e] can be generated in the base. [_{NP}e] is then referred to as PRO. The index _i of an [_{NP}e] that is PRO is assigned by a rule of control.

PRO and a trace of an NP therefore differ in the way in which they receive indexes:

PRO by a rule of control and trace by a movement rule.

2.8.1.3 The rule that assigns an antecedent to *each other*

The effect of this rule can be illustrated by referring to the following examples:

33.1 They like each other

33.2 *I like each other

This rule is responsible for the reciprocal interpretation of

they and *each other*. These are associated by the mechanism of coindexing.

In 33.2 coindexing is not possible since *each other* requires a plural antecedent.

2.8.1.4 Simplification of the rules of construal

In 'On Binding'⁴⁸ Chomsky simplifies the rules of construal. He proposes that the following rule is responsible for all instances of control:

34. COINDEX

The rule which assigns an antecedent to *each other* is formulated as follows:

35. Each other is a reciprocal phrase.

These rules do, however, overgenerate. For example, 34 as stated, can assign the index of any NP in a sentence to PRO, e.g.

36. *John asked Bill [_S who [PRO visited t]] [t is the trace of who]

With the verb *ask*, control is exercised by its subject NP. Rule 34 would thus coindex PRO with *John*. But 36 does not mean 'John asked Bill which person he, John, visited'. This in effect implies that general conditions need to be placed on the simple rules 34 and 35 in order to restrict the association of anaphors and antecedents. Some of these conditions are summarized in Table 7 below.

2.8.1.5 Conditions on anaphors

TABLE 7 - CONDITIONS ON ANAPHORS

Condition	Characterization	Examples
1. c-command ¹	States that an antecedent must c-command ² its anaphor	Rules out the association of PRO with the NP <i>Peter</i> in 1) and coindexes the PRO with the NP <i>Bill</i> ³ 1) John told Bill [PRO to kill Peter]
2. opacity ⁴	If α is in the domain of the subject of β , β minimal, then α cannot be free in β	The NP <i>John</i> cannot be moved out of the embedded \bar{S} in 2a) to the higher S to form 2b) where the trace of John is free in \bar{S} 2a) [_{NP} e] seems [\bar{S} Bill to like John] 2b)*[_{NP₁} John] seems [\bar{S} Bill to like [_{NP₁} e]]
3. Nominative Island Constraint (NIC)	A nominative anaphor in S cannot be free in \bar{S} containing S	The NP <i>John</i> cannot be moved out of the 'tensed' clause in 3a) to form 3b) 3a) [_{NP} e] is believed [\bar{S} John is incompetent] 3b)*[_{NP₁} John] is believed [\bar{S} [_{NP₁} e] is incompetent]

¹The 'c-command' condition is a general condition on the rules of coindexing.

²The notion *c-command* was introduced in note 1 of Table 4.

³The application of the coindex rule, as already noted is subject to the lexical properties of the matrix verb. With the verb *tell*, control is exercised by the object NP and thus PRO is coindexed with the NP *Bill* and not *John*.

⁴The opacity and NIC conditions are known as binding conditions. They specify that anaphors must be bound under stipulated circumstances.

2.8.1.6 LF and free variables

A well-formed representation in LF may not contain a free variable. A free variable is an $[_\alpha e]$ that is not coindexed with a category that 'c-commands' it and which is not assigned the index arb . Therefore if in a surface structure an $[_\alpha e]$ occurs that is not assigned an index by a rule of control, that surface structure will be ruled out as semantically ill-formed. This can be illustrated in the following examples.

37. $*[\bar{S}[S[_{NP_e}][_{VP} \text{was} [_{AP} \text{en}]_{VP}[_{V} \text{hit}][_{NP} \text{Bill}]]]]]$

The optional NP-movement rule may apply to 37 to derive the surface structure 38.

38. $[\bar{S}[S[_{NP_1} \text{Bill}]][_{VP} \text{was} [_{AP} \text{en}]_{VP_1}[_{V} \text{hit}][_{NP_1} e]]]]]$

Since the NP-movement rule like all T-rules is *optional*, 37 can also occur as a surface structure. For a well-formed representation in LF to be derived from 37, an index would have to be assigned to the $[_{NP_e}]$. However, the rule of control cannot assign an index to this category since there is no NP that c-commands it.

The representation in LF derived from 37 thus contains a free variable and for this reason it is not well-formed. Therefore, in instances such as 37 the NP-movement rule is in fact obligatory.

2.8.1.7 Rule of focus

The rule of focus is yet another rule that plays a part

in the formation of representation in LF. Only certain aspects of the rule are discussed in the paragraphs below. Chomsky notes⁴⁹ that in a sentence such as 39 the word *John* cannot serve as the antecedent of *he* if the main stress falls on the former (i.e. *John*), whereas if the stress falls on *betray* then *he* and *John* can be associated.

39. The woman he loved betrayed John

These facts, according to Chomsky, may be clarified by applying the so-called rule of focus, which, for example, assigns to 39 (where the main stress is on *John*) the representation 40.

40. the X, such that the woman he loved betrayed X, is
John

Chomsky argues that the replacement of *he* by X cannot apply to 40; it is blocked by a subsidiary principle of anaphor, formulated as follows:

41. A variable cannot be the antecedent of a pronoun to
its left

In contrast, the replacement of *he* by X would not have been blocked had the main stress been on *betray* rather than *John* in 39.

These observations have led to the suggestion that the rule of focus may be involved in determining the representations that provide the information relevant to the appropriateness of certain discourses involving so-called cleft sentences, as it is in the case of 40 above.

If so, the according to Chomsky:⁵⁰

"...it follows that LF will include an indication of focus and presupposition in the sense relevant to determining the status of cleft sentences and the discourses in which they are appropriate."

This viewpoint has then an important implication concerning the nature of LF:⁵¹

"Suppose it were shown that the presupposition in question is "pragmatic" rather than "logical"; say, that it relates to rules of conversational implicature rather than inference. We would then conclude that LF provides representations relevant to pragmatic presupposition. One might therefore conclude that "logical form" is not an appropriate term for the representations of meaning given by the grammar i.e., not an appropriate way to read the technical term "LF",..."

2.9 Further remarks on anaphoric relations

It would be fitting here to comment further on the nature of anaphoric relations since this topic has played a very important role in the traditional analysis of relative clauses,⁵² and has also featured prominently in the structure of Core Grammar. Let us begin by clarifying certain terms that are generally used in the literature in the description of anaphoric relations. We have noted that in a sentence such as 42 below the reference of *his* is fixed by *John*.

42. *John* has lost *his* way

Here *John* is generally referred to as the *antecedent* and

his, the *anaphor*. The relation between these two words is known as a *relation of anaphora* or an *anaphoric relation*, and given the technical notion of 'binding' from predicate logic,⁵³ this type of relation may be taken to be one of *bound anaphora*.

Within the framework of trace theory the relation between a moved NP (which, incidentally, may be an interrogative word) and its trace is construed as a relation of bound anaphora. In the sentences below, for example, the italicized words *bind* their respective traces.

43. [_S *John* is certain][_S to win]

44. [_{COMP} *who*][_S he said Mary kissed t]

The term generally used to indicate that two NPs refer to the same entity/entities is *coreferentiality*.

So, for example, in 45.1 below the two capitalized noun phrases can be taken to be coreferential, whereas 45.2 and 45.3 permit a non-coreferential interpretation only.

45.1 Oscar finally realized that HE was unpopular

45.2 *OSCAR finally realized that OSCAR was unpopular

45.3 *HE finally realized that OSCAR was unpopular

(It should be noted that 45.1 permits a non-coreferential interpretation as well).

2.9.1 The non-coreference rule

To explain the coreference/non-coreference properties of strings of the above type Lasnik, consolidating relevant

research done by various linguists,⁵⁴ proposes a general rule of non-coreference which is formulated as follow:⁵⁵

46. "If NP_1 precedes and kommands NP_2 and NP_2 is not a pronoun, then NP_1 and NP_2 are disjoint in reference."

Lasnik characterizes the *word* 'kommands' as follows:⁵⁶

"A *kommands* B if the minimal cyclic node dominating A also dominates B."

This non-coreference rule, which is a rule of sentence grammar, presupposes the assumption that pronouns are generated in the base. (In this regard see p. as well). The rule is postulated to exclude "the impossible coreference relations that could accidentally result from the presence of some pronouns in the base."⁵⁷ Thus, for example, it acts as a type of filtering device to block out a coreferential reading in a sentence such as the following:

47. *He* finally realized that *Oscar is unpopular*

The non-assignment of the non-coreference rule to a sentence such as 46.1 leaves open the possibility that the reference of the noun phrase *he* may be fixed by rules of one or more cognitive domains outside sentence grammar. These extra-grammatical rules are free to assign either a non-coreferential reading or a coreferential one.

Thus in explaining the non-coreferential interpretation of 46, Lasnik states,⁵⁸

"What we have is simply a principle of co-operation. By this I mean that a speaker must

provide every reasonable means for his listener to know what he is talking about. Stated this way, the explanation can readily be seen not to be a claim about pronouns but rather about getting along with people, not about language, but about communication. And indeed, pronouns have no special status in this regard."

An illustration of this viewpoint can be clearly seen in a sentence such as the following:

48. She dances well!

Commenting on the use of the pronoun *she* in 59, Lasnik, subscribing to the view expressed by Postal,⁵⁹ states,⁶⁰

"The idea that a form like *she* in *she dances well* is a 'replacement' or 'substitute' for some other noun, say in 'discourse contexts' or the like, seems to me completely without basis. Such an assumption explains nothing for the quite simple reason that there is nothing really to explain. It is quite sufficient to indicate precisely that such forms refer to object-types whose particular referents are assumed by the speaker to be known to the person spoken to."

Chomsky's ideas on this 'category of anaphoric relations' are similar, as is reflected, for example, in the following passage:⁶¹

"...we have the problem of determining the reference of words such as *the others* or even *he* in sentences of the type: *He has arrived, Some reacted well, but the others were angry...* It is not grammatical principles (or more precisely, principles of sentence grammar) which govern the relations of these pronouns to their antecedents or intended referents. There are many other conventions in discourse beyond the rules of sentence grammar. If I say, while showing you this

photograph, *He is a good kid*, that would be quite correct, because it is perfectly acceptable to present this boy to you in this way in this context: we are looking at a photograph on my desk, and we share certain assumptions about photographs, and specifically photographs that one puts on one's desk; you imagine that this is a photograph of my son because otherwise it wouldn't be there, and so on. Thus, in a much larger context which is not linguistic but rich in beliefs of varied sorts, my statement is perfectly appropriate. But these conventions of reference are not part of grammar. To express them would require a richer theory, integrating a number of cognitive systems, including your assumptions about what one expects to see on my desk. All that plays a role in what some might call the full semantic representation."

On the status of pronouns in a sentence grammar Chomsky proposes two assumptions. These may be stated as follows:

- (i) All pronouns are generated by the base rules
- (ii) Every pronoun is marked by a suitable formal mechanism of the base component as being either [+anaphoric] or [-anaphoric].

2.13 Concluding remarks on Section B

The summary presented in this section clearly shows the differences that exist between the organization and structure of a core grammar and the organization and structure of earlier versions of transformational generative grammar. The differences can be represented diagrammatically as follows:

Diagram 1: The overall organization of an earlier version of generative grammar, (e.g. the Standard Theory).

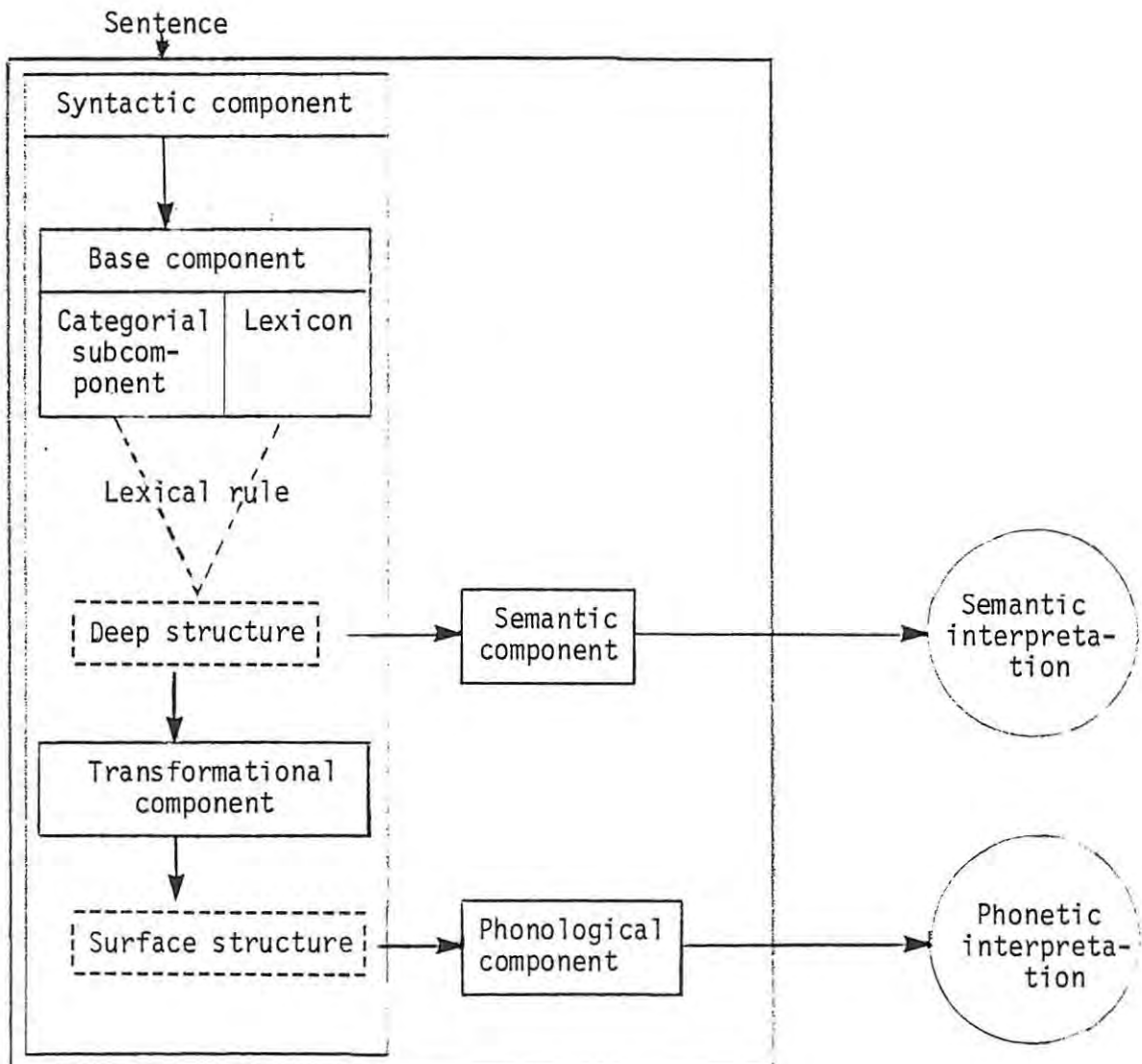
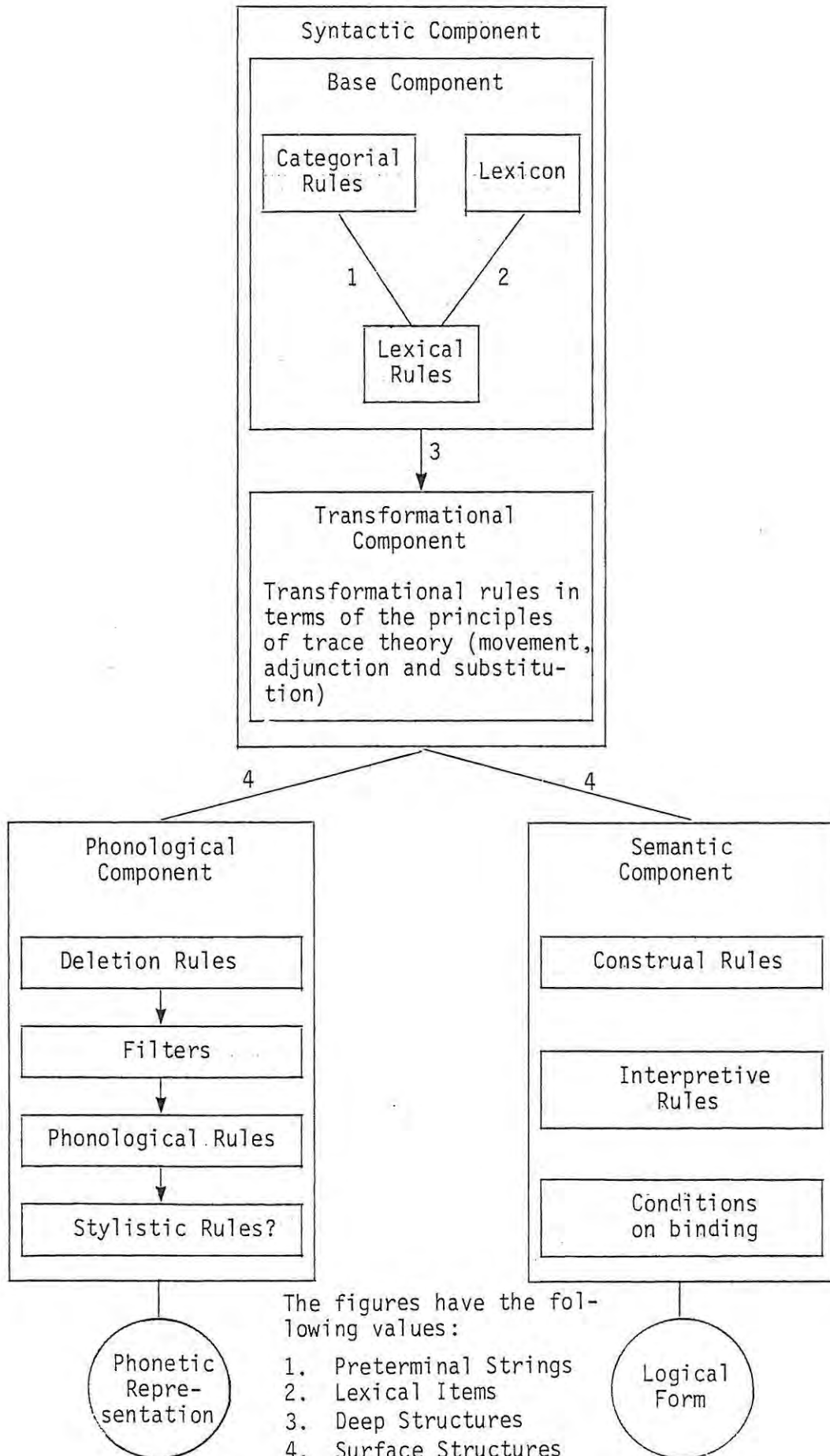


Diagram 2: The overall organization of a core grammar



FOOTNOTES TO APPENDICESAPPENDIX 1

- 1) Botha (1968:50).
- 2) Northrop (1967).
- 3) *Ibid*:1.
- 4) *Ibid*:2.
- 5) *Ibid*:16.
- 6) *Ibid*.
- 7) *Ibid*:30.
- 8) *Ibid*:35.
- 9) For a discussion of this concept see Botha and Winckler (1973:55ff) and Northrop *op.cit.*:35ff.
- 10) Northrop *op.cit.*:60.
- 11) *Ibid*:60-61.
- 12) Langacker (1972:24).
- 13) *Ibid*.
- 14) *Ibid*.
- 15) *Ibid*.
- 16) *Ibid*:28.
- 17) *Ibid*:32.

APPENDIX 2

- 1) Botha (1968:13).
- 2) Chomsky (1965:6).
- 3) Botha *op.cit.*:19.

APPENDIX 2 - contd

- 4) Botha *op.cit.*:19.
- 5) Chomsky distinguishes between *rule-governed* and *rule-changing* creativity. The former kind leaves the language entirely unchanged "(as in the production - and understanding - of new sentences, an activity in which the adult is constantly engaged)." (Chomsky (1964:22)). The latter kind, on the other hand actually changes the set of grammatical rules. It is *rule-governed* creativity that transformational generative grammar is concerned with.
- 6) Botha *op.cit.*:19.
- 7) Hendrikse (1977:4).
- 8) For a discussion of the formal apparatus in terms of which the creative processes of language are expressed see Hendrikse *op.cit.*:326.
- 9) Chomsky *op.cit.*:27.
- 10) *Ibid*:27-28.
- 11) A third type, namely *organizational universals* was recognized in the earlier versions of transformational generative grammar.
- 12) Chomsky *op.cit.*:28.
- 13) Two versions are currently recognized within Core Grammar: (i) the 'On Binding' (OB) theory, and (ii) the 'Government Binding' (GB) theory. Only aspects of the 'On Binding' theory are discussed here.
- 14) This has been extracted from Chomsky (1980a:3).
- 15) Stylistic rules, according to Chomsky and Lasnik (1977:433) probably fall outside the domain of a Core Grammar.

"One might just as well say that sentence grammar, or at least Core Grammar, abstracts away from these phenomena."

If this is so, then it is not necessary to discuss these rules in this section.
- 16) Chomsky (1977a:5).

APPENDIX 2 - contd

- 17) For an in-depth discussion of the properties and rules of the lexicon, see Aronoff (1976).
- 18) In earlier expositions of transformational grammar a base phrase marker was referred to as a *deep structure*.
- 19) Chomsky and Lasnik *op.cit.*:432.
- 20) The term traditional is here used to refer to transformational rules that characterize generative grammar in the period prior to the theory of Core Grammar.
- 21) Emonds (1976:4).
- 22) Chomsky (1976:95).
- 23) See Chomsky (1977a:9).
- 24) *Ibid.*
- 25) This table is set out on the following page.
- 26) Roughly, [_{COMP} + WH] represents interrogative clauses (direct or indirect questions) whereas [_{COMP} - WH] represents non-interrogative clauses (declarative or relative clauses).
- 27) Chomsky and Lasnik *op.cit.*:446.
- 28) *Ibid.*
- 29) *Ibid.*:447.
- 30) *Ibid.*:452. There is no clear indication as to whether this truly is a rule of Core Grammar.
- 31) In this regard see Chomsky (1980a:6), footnote 6.
- 32) By the term *obligatory* is here meant "delete whenever possible, that is, except where deletion is unrecoverable." Chomsky *op.cit.*:21.
- 33) See Chomsky *op.cit.*:21ff for more details.
- 34) Chomsky and Lasnik *op.cit.*:444.

APPENDIX 2 - contd

- 35) Chomsky and Lasnik *op.cit.*:488.
- 36) *Ibid*:489.
- 37) *Ibid*.
- 38) *Ibid*:465.
- 39) *Ibid*:470.
- 40) *Ibid*:465.
- 41) *Ibid*:470.
- 42) *Ibid*:436.
- 43) Chomsky (1976:104).
- 44) The term 'rules of semantic interpretation' is generally used to refer to rules that produce representations in LF.
- 45) Chomsky *op.cit.*:104.
- 46) *Ibid*:105.
- 47) Chomsky (1980a:10).
- 48) *Ibid*:9.
- 49) Chomsky (1977:203-204) and (1980b:166).
- 50) Chomsky (1980b:167)
- 51) *Ibid*.
- 52) See, for example, the comments made in Chapter 2, section 2.2.2.1.
- 53) See Copi (1968) for a discussion of certain general concepts in this regard.
- 54) In particular Jackendoff, Postal and Wasow.
- 55) Lasnik (1976:16). By 'disjoint in reference' is meant that the two references have nothing in common or, in other words, they are mutually exclusive.

APPENDIX 2 - contd

- 56) Lasnik *op.cit.*:15.
- 57) *Ibid*:7.
- 58) *Ibid*:2.
- 59) Postal (1969).
- 60) Lasnik *op.cit.*:2.
- 61) Chomsky (1977e:147).

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