

A Comparative Study of Selected Ellipsis Constructions in English and isiZulu

A thesis submitted in fulfilment of the requirements for
the degree of:

Master of Arts

in the Graduate Programme in Linguistics, University
of KwaZulu-Natal, Howard College, South Africa.

By Andrew John Bevis

Supervisor: Professor Jochen Zeller

December 2018

Declaration

I, Andrew Bevis, declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
 - a. Their words have been re-written but the general information attributed to them has been referenced.
 - b. Where their exact words have been used, then their writing has been placed in italics and inside quotation marks, and referenced.
5. This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References sections.

Student Name

Name of Supervisor

Date

Date

Abstract

This work is a comparative study of verb phrase ellipsis (and verb-stranding verb phrase ellipsis), sluicing and gapping, along with some of their subtypes, in English and the Bantu language isiZulu. The goal of the present study was to determine from the literature how ellipsis is characterised in English and which ellipsis constructions are attested in isiZulu, which remains practically unstudied in this regard. There is a large body of literature written in the framework of the Minimalist Program (as part of Generative Grammar) on these ellipsis constructions as they appear in English. I draw on selected discussions from this literature in order to give an overview of these constructions and of the key research questions surrounding the study of ellipsis. These questions involve the nature of the ellipsis site in which linguistic material that would otherwise be required is not pronounced but is nevertheless still interpreted, how ellipsis is licensed, how unpronounced material is recovered and how the process of ellipsis is implemented. This thesis focuses on arguments which suggest that the ellipsis site contains fully articulated syntactic structure which is elided by way of being deleted at PF under the correct focus conditions. Evidence for syntactic conditions on ellipsis is also considered, as are some alternative analyses of ellipsis. The literature on ellipsis in Bantu languages is very scant. I highlight the findings of the few studies on Bantu which do exist, and make an original contribution to this area of study by providing data for the aforementioned ellipsis constructions in isiZulu. Unlike the Bantu languages which have already been reported on, isiZulu does seem to have a type of VP-ellipsis which is just like English VP-ellipsis. A further unexpected finding is that isiZulu does not have verb-stranding VP-ellipsis, which has been reported to exist in some Bantu languages as well as in non-Bantu languages with verb raising. Finally, sluicing and gapping have been reported to be possible in some Bantu languages, and my data shows that they are attested in isiZulu as well.

Acknowledgements

There are several people whose help and guidance have helped me to complete this thesis. My supervisor, Professor Jochen Zeller, has my deepest and sincerest gratitude for all the help and guidance he has shown me and for his support and patience over what has been a long and at times difficult road. I must also thank my mother and my friends, especially Heike and Matthew, for their support in trying times. On a further personal note, I would never have made it to this point without the support of my parents. Nor indeed would I have even begun on this journey if my mother had not instilled and nurtured in me a love of learning. From the University of KwaZulu-Natal Linguistics Department, I would like to thank Professor Jochen Zeller (again), Professor Heike Tappe and Doctor Langa Khumalo for introducing me to linguistics, for providing an encouraging and stimulating academic environment and for being mentors and role models for both my personal and my academic life. I must also thank the University itself for providing me with a generous scholarship at the beginning of my studies.

Next I must thank the isiZulu speakers who helped me construct and refine the isiZulu examples which appear in this thesis. They are Thandeka Maphumulo, Phiwe Ngcoya, Rooweither Mabuya, Mandisa Ndlovu, Muhle Sibisi, Mthuli Buthelezi, Njabulo Mpungose and Nothando Mzulwini. Finally, I would like to thank the participants at the 4th South African Microlinguistics Workshop and the pre-workshop of the 31st Comparative Germanic Syntax Workshop for their valuable feedback on some of the preliminary work that forms part of this thesis and for the encouragement which they offered me.

Contents

Declaration.....	i
Abstract	ii
Acknowledgements	iii
1 Introduction.....	1
1.1 Introduction to Ellipsis	1
1.2 Thesis Outline	3
1.3 Overview of isiZulu.....	6
1.4 Methodology	9
2 The Minimalist Program.....	12
2.1 Introduction to the Minimalist Program	12
2.2 Generative Grammar	12
2.3 S_0	14
2.4 I-Language	16
2.5 Narrow Syntax	18
2.6 Example	20
2.7 The MP and Ellipsis	22
3 VP-ellipsis	24
3.1 VP-ellipsis in English	24
3.1.1 Introduction	24
3.1.2 Content of the Ellipsis Site.....	24
3.1.3 Identity	30
3.1.4 Licensing	37
3.1.5 Merchant's (2001) Theory of Ellipsis.....	43
3.2 Verb-stranding VP-ellipsis.....	47
3.2.1 Introduction	47
3.2.2 Verb-stranding VP-ellipsis is VP-ellipsis	48
3.2.3 Verb-stranding VP-ellipsis Versus Null Objects	51
3.2.4 Other Notes on Verb-stranding VP-ellipsis	63
3.2.5 Conclusion	65
3.3 Ellipsis in isiXhosa	66
3.3.1 Introduction to Ellipsis in isiXhosa	66
3.3.2 Ma's (2017) Findings on VP-ellipsis in isiXhosa	66
3.3.3 Other Types of Ellipsis in isiXhosa.....	69

3.4 VP-ellipsis in isiZulu	74
3.4.1 IsiZulu VP-ellipsis	74
3.4.2 IsiZulu verb-stranding VP-ellipsis	78
3.4.3 Is There VP-ellipsis in isiZulu?.....	91
3.5 Conclusion	92
4 Sluicing.....	93
4.1 Sluicing in English	93
4.1.1 Introduction	93
4.1.2 The Ellipsis Site in Sluicing.....	95
4.1.2.1 Nature of the Ellipsis Site	95
4.1.2.2 ‘Immunity’ to Islands.....	99
4.1.3 Identity	104
4.1.4 Licensing in Sluicing	107
4.2 Sluicing in Bantu	109
4.2.1 Sluicing in Other Bantu Languages.....	109
4.2.2 Sluicing in isiZulu	112
4.3 Conclusion	117
5 Gapping	118
5.1 Gapping in English (and Other Languages).....	118
5.1.1 Introduction.....	118
5.1.2 Properties of Gapping	119
5.1.2.1 Basic Observations	119
5.1.2.2 Restrictions on Remnants and Other Observations	122
5.1.3 Johnson’s Approach	125
5.1.4 Hartmann’s Approach.....	131
5.1.5 Stripping.....	134
5.1.6 Pseudogapping	135
5.2 Gapping in Bantu.....	139
5.2.1 Gapping in Other Bantu Languages	139
5.2.2 Gapping in isiZulu	142
5.2.3 Conclusion: Gapping in Bantu	149
5.3 Conclusion	150
6 Conclusion	151
References	154

Abbreviations Used in Glosses

Where I have used examples from other sources, I have adapted the original author's glosses to match the system which I use.

Bantu noun class prefixes are marked using numbers. These numbers also appear on agreement markers.

1 st , 2 nd , 3 rd , = first, second, third person	ACC = accusative
ADJ = adjectival agreement marker	APL = applicative
ASP = aspect	AUG = augment
CAUS = causative	CL = classifier
COMIT = comitative	CONJ = conjunction
COP = copulative	DAT = dative
DECL = declarative	DEM = demonstrative pronoun
DIS = disjoint verb form	EC = empty category
EMPH = emphatic	ERG = ergative
EVID = evidentiality marker	F = feminine
FOC = focus	FUT = future tense
FV = final vowel	GEN = genitive
IND = indicative	INDF = indefinite
INF = infinitive	INSTR = instrumental
LOC = locative marker	M = masculine
NEG = negation	NOM = nominative
OBL = oblique case	OM = object agreement marker
PAS = passive	PFV = perfective
PL = plural	POSS = possessive
PRE = present tense	PRO = pronoun
PST = past tense	PTCP = participle
Q = question particle	RC = relative concord
REF = referential	REL = relative marker
RPST = remote past tense	RS = relativising suffix
SG = singular	SM = subject agreement marker
SUBJ = subjunctive	TOP = topic

1 Introduction

In this thesis, I present a comparative study of selected ellipsis constructions in English and in isiZulu. This study was undertaken using the Minimalist framework of Chomsky (1995, 2001a, a.o.) and as such is concerned with the grammatical issues surrounding ellipsis constructions as they appear in English and isiZulu.

1.1 Introduction to Ellipsis

Before proceeding any further, I believe that it is important to explain to the reader what is meant by the term ‘ellipsis’ as it is used in theoretical linguistics. In theoretical linguistics, ellipsis refers to a special type of sentence where a part of the sentence which would be redundant has been left out. To the uninitiated, a sentence such as that in (1)a seems to be perfectly normal, but to a linguist (1)a is special.

- (1)a. Tim is sleeping and Lucy is too.
b. Tim is sleeping and Lucy is sleeping too.

(1)a is in fact an ellipsis construction, which becomes apparent when it is compared to (1)b, which is the unelided form of (1)a. Strictly speaking, (1)a and b are made up of two sentences each. These two sentences have been co-ordinated or joined by the conjunction *and*. The two sentences in (1)a (and in b) are each referred to as conjuncts. In all the examples discussed in this thesis, ellipsis takes place in the second conjunct while the first conjunct acts as an antecedent for the second. The obvious difference between (1)a and b is that in (1)a, the word *sleeping* has been left out of the second conjunct, while in b, it has not. However, what we actually understand when we read or hear a construction like (1)a is the meaning that is overtly expressed by b. In other words, even though the verb *sleeping* has been left out of the second conjunct of (1)a,

we still understand that Lucy is sleeping just as we do in b, where no words have been omitted.

Some further important points concerning ellipsis and the terminology used to analyse this phenomenon are the following. The conjunct in which ellipsis takes place is usually referred to as the *elliptical conjunct*. The *ellipsis site* is the position where ellipsis itself has occurred. I have adopted the common approach from the contemporary literature which is to show the elided material with a strikethrough (see examples (2)-(5) for instance).¹

Ellipsis constructions come in several different forms, with each form having its own name. (2) is an example of so-called verb phrase ellipsis (*VP-ellipsis*), where the whole verb phrase has been elided, while the auxiliary is still overtly realised in the elliptical conjunct. (3) is an example of *sluicing*, where the clause which follows the *wh*-phrase in the second conjunct has been elided. (4) is an example of *gapping*. Gapping is characterised by the elision of the verb (and possibly more material as well) together with another element remaining behind following the ellipsis site. (5) is an example of *pseudogapping*, which has characteristics of both gapping and VP-ellipsis but is usually analysed as a type of VP-ellipsis.

- (2) Timothy has dug a hole in the back garden and Lucy has ~~dug a hole in the back garden~~ too.
- (3) Lucy has stolen something, but I don't know what ~~Lucy has stolen~~.
- (4) Lucy is chewing a bone, and Tim ~~is chewing~~ a stick.
- (5) Andrew will travel in December and Matthew will ~~travel~~ in January.

¹ In my thesis, I only entirely omit the elided material in certain examples where this facilitates the discussion at hand and in non-English examples which are cited from other authors who have not indicated what the elided material should look like.

There are many more ellipsis constructions besides these ones, with a few other examples being right node raising, antecedent contained deletion and NP-ellipsis (see the introduction in Merchant (2001), Johnson (2008a) and van Craenenbroeck and Merchant (2013) for a more extensive list of different types of ellipsis constructions and their defining properties.

Originally, I intended to give an overview of several different ellipsis constructions in English and to see which of the different constructions mentioned in the literature were attested in isiZulu. However, as my own understanding and knowledge of ellipsis grew, I came to realise that it would be better to cover just some of the ellipsis constructions that appear in the literature and discuss them in detail. Due to this, the scope of this thesis has been somewhat narrowed down since I originally set out to conduct my research. The ellipsis constructions which I have settled on for discussion in this thesis are VP-ellipsis and its counterpart found in languages with verb raising, verb-stranding VP-ellipsis, sluicing and its subtypes, gapping and the closely related construction stripping (also referred to as bare argument ellipsis), and pseudogapping. I settled on these constructions as in my opinion, they are the ones best covered in the literature and also because they turned out to be easiest in terms of data collection for my investigation into isiZulu.

1.2 Thesis Outline

This thesis is divided into six main chapters; the structure is as follows. This first chapter serves as an introduction to the thesis and some of the key ideas therein.

Chapter 2 covers the theoretical framework of the Minimalist Program, which has informed much of the work done on ellipsis, my own included. It covers the fundamental concepts of Generative Grammar and Minimalism and explains the operations Merge, Move and Agree and their role in constructing syntactic objects.

Chapters 3, 4 and 5 each cover a central ellipsis construction and relevant subtypes of that construction. The first part of each of these chapters takes the form of a literature review, examining the analysis and key traits of the particular type of ellipsis under consideration. I would like to state at the outset that I make no attempts at producing an exhaustive discussion of any of the ellipsis constructions which I discuss, the literature on these is simply far too vast.² Instead, I have tried to identify the most influential analyses of the respective ellipsis constructions and to give an overview of just one or two of these analyses for each construction. This gives more of a ‘snapshot’ view of each construction while still providing important information on the construction’s key attributes and how it is analysed. The second part of each of these chapters begins with a discussion of the findings for its specific ellipsis construction in Bantu languages. This serves to lead into a discussion of my findings for that construction in isiZulu.

Chapter 3 looks at VP-ellipsis. VP-ellipsis is the most extensively researched type of ellipsis by quite some margin. In this chapter I introduce the three core concerns in the study of ellipsis. The first is known as licensing, which involves the conditions under which ellipsis can take place. The key observation for VP-ellipsis is that an auxiliary always precedes the ellipsis site and is somehow involved in licensing VP-ellipsis, with Merchant (2001) suggesting that the auxiliary carries a special feature called [E], which is responsible for licensing ellipsis. The second issue is referred to as ‘identity’ or ‘recoverability’ and involves the nature of the connection between the ellipsis site and its antecedent which allows for elided material to be interpreted. The literature is somewhat divided on this topic, with some arguing that the identity relationship is syntactic in nature while others suggest that it is semantic. While both theories face challenges, Merchant (2001) makes a strong case in favour of a semantic approach to identity. The third issue concerns the nature of the ellipsis site itself. While it may appear that the (otherwise) expected material is simply not there when it has been elided, this chapter looks at evidence which suggests that the ellipsis site contains syntactic structure that remains in the ellipsis site but does not get pronounced. The form in which VP-ellipsis appears in English seems to be unattested in many other

² Even Merchant (2016, 2), perhaps the leading figure in the literature on ellipsis, states that “vast bibliographies can be compiled,” for the existing literature on ellipsis. For those looking for information on some of the key work on ellipsis, I have found Johnson (2008a), the introduction in Merchant (2001) and van Craenenbroeck and Merchant (2013) to be very informative.

languages. However, since Goldberg (2005), another type of VP-ellipsis, called verb-stranding VP-ellipsis, has been recognised in several different languages, including the Bantu languages Ndebele and Swahili. An interesting finding from my investigation of isiZulu is that verb-stranding VP-ellipsis seems to be impossible in isiZulu, while English-like VP-ellipsis is attested in isiZulu, with certain deficient verbs fulfilling the same role as auxiliaries do in English.

Chapter 4 looks at sluicing. Sluicing is often analysed as being the same type of ellipsis as VP-ellipsis, with the ellipsis site in sluicing being larger than in VP-ellipsis. The issues of licensing, identity and the content of the ellipsis site are central questions in sluicing as well. Once again, I recount Merchant's (2001) analysis which brings these issues together and offers one comprehensive explanation of sluicing, based on the idea of the [E] feature. Bassong (2014) was the first to examine sluicing in a Bantu language and found that sluicing is attested in Basàá. Although my data only covers the subtype of sluicing known as sprouting, sluicing does seem to be attested in isiZulu.

Chapter 5 is on gapping and pseudogapping. This chapter looks at two opposing accounts of gapping, one of which tries to account for gapping as a product of syntactic movement (Johnson, 2008b), while the other views gapping as a type of phonological deletion (Hartmann, 2000) that is not so different to VP-ellipsis and sluicing. Stripping is also discussed in this chapter, as it is usually seen as being closely related to gapping. Pseudogapping is discussed as well, though pseudogapping turns out to be a type of VP-ellipsis which shares some traits with gapping, rather than a subtype of gapping. To the best of my knowledge, Manus and Patin (to appear) is the only work on gapping and pseudogapping in Bantu to date. Their work shows that gapping is attested in Swahili and Shingazidja, but that pseudogapping is not attested in either language. In contrast, my research on isiZulu suggests that gapping, stripping and pseudogapping are all attested in isiZulu.

Chapter 6 is the conclusion of the thesis. It consists of a summary of my investigation into ellipsis in English and isiZulu. It also discusses some of the shortcomings of my work and highlights potential areas of future research.

1.3 Overview of isiZulu

IsiZulu, often referred to as just Zulu, is a Bantu language of the Nguni cluster. The Nguni cluster is labelled as S40 under Guthrie's (1967) classification of Bantu languages. IsiZulu is mainly spoken in the KwaZulu-Natal province of South Africa but is also found in the other eight provinces of South Africa and in other Southern African countries. According to census data from 2011, 11 587 374 South Africans speak isiZulu as their first language, which is more than 22% of the population of South Africa (Statistics South Africa, 2012, 23).

IsiZulu is an agglutinating language with SVO word order and displays rich agreement morphology on the verb. Nouns in isiZulu are divided into fifteen noun classes, with noun class being a combination of [gender] and [number] features. The verb in isiZulu is marked for agreement with the subject's [gender] and [number] features (i.e. the noun class of the subject). The verb can also agree with the object's [gender] and [number] at the same time, but it can only agree with one object in constructions where there is more than one object. Inflectional morphemes associated with tense and negation appear on the verb, as do derivational morphemes in causative and applicative constructions, amongst others. The simple sentence in (6) shows some of this morphological marking.

- | | | | | |
|-----|-----------------------------------|------------------|------------|---------|
| (6) | U-m-fundi | u-zo-yi-funda | i-ncwadi. | isiZulu |
| | AUG-1-teacher | SM1-FUT-OM9-read | AUG-9.book | |
| | ‘The teacher will read the book.’ | | | |

In (6), *fundi* is a noun class 1 noun and it takes the noun class 1 noun class prefix *m-*. The *u-* of the subject is referred to as the augment; the form which the augment takes

depends upon the noun class of the noun to which it attaches. In my examples in the chapters that follow, I have simply treated the augment and the noun class marker as a single element and have glossed them as though they were the noun class marker. The verb in (6) takes a subject agreement marker, *u-*, which agrees with the subject, *umfundi*. The object of the sentence, *incwadi*, belongs to noun class 9. According to Buell (2005, 8), it takes a null noun class prefix. However, its noun class can be deduced from its augment, *i-*, and the form which it takes in the plural. The verb is marked for agreement with the object, with the noun class 9 object agreement marker being *yi-*. The morpheme *zo-*, which appears between the subject agreement marker and the object agreement marker, is the future tense morpheme. The following table, adapted from Buell (2005, 8) and isiZulu.net (2018) shows the full range of noun class prefixes, subject agreement markers and object agreement markers.³

³ But see van der Spuy (2017, 195) for more recent and detailed analysis on the noun classes in isiZulu.

Class	AUG	Class marker	SM	OM
1	u-	m-	u-	m-
2	a-	ba-	ba-	ba-
1a	u-	∅	u-	m-
2a	o-	∅	ba-	ba-
3	u-	m-	u-	wu-
4	i-	mi-	i-	yi-
5	i-	li- ⁴	li-	li-
6	a-	ma-	a-	wa-
7	i-	si-	si-	si-
8	i-	zi-	zi-	zi-
9	i-	∅ ⁵	i-	yi-
10	i-	zi-	zi-	zi-
11	u-	lu-	lu-	lu-
10 ⁶	i-	zi-	zi-	zi-
14	u-	bu-	bu-	bu-
15	u-	ku-	ku-	ku-
17		ku-	ku-	ku-

Other grammatical properties of isiZulu which are relevant for specific examples (such as the conjoint-disjoint alternation) are discussed alongside those examples in later chapters.

⁴ The noun class prefix of class 5 nouns only appears on some monosyllabic noun stems but is otherwise left out.

⁵ Buell (2005, 8) treats the noun class marker of class 9 as a zero affix and the noun class marker of 10 as *zi-*, but others such as van der Spuy (2017, 196) treat the class 9 marker as *n-* and the class 10 marker as *-zin* (Buell (2005, 8) treats this ‘n’ as part of the verb stem).

⁶ Noun class 11 takes its plural from noun class 10.

1.4 Methodology

The aim of my research has been to determine from the literature how ellipsis is characterised in English and which of the ellipsis constructions found in English are also attested in isiZulu. While data on English is readily available in the literature, ellipsis remains almost entirely unresearched in isiZulu. Data for isiZulu ellipsis constructions was collected by means of native speaker grammaticality judgements. This method, based on Chomsky (1965 and 1986) works on the assumption that native speakers of a language are able to use implicit knowledge of their language to tell whether or not a sentence is grammatical in their language.

As I am not a first language isiZulu speaker I consulted frequently with first language isiZulu speakers (mostly from the University of KwaZulu-Natal Linguistics Department) for the sections of this thesis which involve empirical investigations of ellipsis constructions in isiZulu. This included the creation of test sentences and ensuring that the grammaticality of the test sentences would hinge on whether or not they involved ellipsis (i.e. so that other potential sources of ungrammaticality were ruled out).

For (basic) VP ellipsis, sluicing, gapping and pseudogapping, I used examples from the literature on these constructions in English as a starting point for creating potential examples of these constructions in isiZulu. With the help of my informants I translated English examples into isiZulu and produced others from scratch, although still using the examples and basic theoretical assumptions for the various types of ellipsis construction as a guide. Therefore, some of the isiZulu examples which are discussed in this thesis will look fairly similar to their English counterparts in the literature. In particular, some of the isiZulu examples will be recognisable from examples in Merchant (2001 and 2008) and Johnson (2008a and 2008b). For verb-stranding VP-ellipsis I used Goldberg (2005) and Manus and Patin (to appear) as a guide for what verb-stranding VP-ellipsis might look like in isiZulu.

The test sentences were arranged into the format of a questionnaire. Informants were asked to rate the sentences from 1 to 5. A 1 indicated that a sentence was ‘very bad’ or in other words, completely ungrammatical. A 2 indicated that a sentence was still bad or poorly formed, but not as bad as a 1. If the informants were unsure about the status of a sentence, they gave it a 3. 4 and 5 were for grammatical sentences, with a 4 indicating that the informant found the sentence to be well formed, but suspected that other isiZulu speakers might perhaps not agree. 5 indicated that the informant found the sentence to be perfectly well formed. I report a particular construction as ‘grammatical’ if the majority of my informants judged it to be so, and ‘ungrammatical’ if the majority of my informants found it ungrammatical. I report the status of a particular construction as ‘uncertain’ if several of my informants were uncertain about it or if there was no clear majority in their judgements.⁷ For every isiZulu ellipsis construction which I discuss, I always mention all the speaker judgements which I collected for that construction. If the majority of the isiZulu examples of a certain type of ellipsis construction (i.e. VP-ellipsis, sluicing etc.) were found to be grammatical, then I reported that type of construction to be attested in isiZulu. In some cases, I asked informants about their interpretation of certain sentences. If most examples of a particular type of ellipsis were rated as ungrammatical, or if they were grammatical but were not interpreted as ellipsis, I reported that type of ellipsis to be unattested in isiZulu. The criteria according to which informants were asked to assess the sentences were explained in English and in isiZulu.⁸

I had two main rounds of collecting grammaticality judgements, with some overlap in informants across the two rounds. All of my informants were (at least) bilingual speakers of both isiZulu and English and most were in their late teens or early twenties. However, my first group of informants also contained one older speaker whose dialect of isiZulu might be somewhat different to that of the younger speakers. Ethical

⁷ Therefore, although I presented my informants with a five point scale, I ultimately interpret the sentences which they assessed as either grammatical, ungrammatical or unclear. The chief motivation behind the use of the five point scale is that I found it useful in refining the test sentences as I developed them. It also provided a more nuanced way to compare the different constructions with each other.

⁸ There are some who question the validity of grammaticality judgements. Schütze (1996, 26) claims that, according to Chomsky’s (1965, 1986, a.o.) own model of performance and competence, native speakers should not be capable of assessing grammaticality, but only acceptability instead. These criticisms are often not addressed in the literature which follows the Chomskyan tradition. Dealing with these criticisms falls well outside of the scope of this thesis, however, I feel it is prudent to acknowledge that the criticisms do exist.

clearance for the research was obtained from the University of KwaZulu-Natal's Humanities & Social Sciences Research Ethics Committee (protocol reference number HSS/1305/015M). Informed consent documents accompanying the questionnaire were in both English and isiZulu.

2 The Minimalist Program

2.1 Introduction to the Minimalist Program

Ellipsis has been studied extensively from the perspective of the Minimalist Program (MP). The MP was officially introduced by Noam Chomsky in 1995 (Chomsky, 1995). Further important contributions and revisions can be found in Chomsky (2000, 2001a, 2004, 2007, 2008 and 2013). The MP is concerned with investigating ‘I-language’, or the internal language of a particular speaker, and views this language not as the speech which speakers produce or as the collective speech and writing of a particular group of people, but rather as the mechanisms by which an individual is able to generate such outputs (Chomsky, 1995, 14). The MP breaks I-language down into three factors. The first component, Universal Grammar (UG), is the human capacity for language. UG refers to the genetically endowed, initial state of an I-language system (before input is received) and the invariant principles which underlie all natural language (Chomsky, 2013, 35). The second component is an individual’s experience of the world, which provides the linguistic input needed to acquire the specific syntactic rules of their language which cannot be attributed to UG. The final component takes the form of principles not specific to language, such as general principles of data analysis and principles of efficient computation (Chomsky, 2005, 6). The idea that the computational system of language must be efficient is one of the key factors of the MP as it endeavours (and takes its name from the endeavour) to reduce the generative rules of language to the simplest, most principled form possible, without the need to stipulate extensive restrictions or the need to invoke multiple computational mechanisms which are solely language-specific (Chomsky, 2005, 9). In the MP, the operations of the computational system of an I-language are viewed as optimal solutions to the conditions which it must fulfil.

2.2 Generative Grammar

The Minimalist Program has developed as the latest iteration of the framework of Generative Grammar and its subsequent iterations. Before the beginning of the

“generative enterprise” (Chomsky, 2013, 34), it had been controversial as to whether language existed as an entity in its own right, the prevailing opinion at the time being that language was merely a constellation of other mental faculties. Generative Grammar claimed that the human faculty of language (FL) was indeed an independent entity and the framework led to much fruitful research into how language might work.

In the generative framework, researchers sought to find generative rules for languages which could account for the formation of any and all sentences which are grammatical in a particular language. Generative rules are not prescriptive rules which declare that some sentences are grammatical while others are not based on more or less arbitrary notions of style. Instead, generative rules are the set of processes or instructions for forming (generating) phrases and sentences in natural language. By virtue of neither overgeneralising nor undergeneralising, these generative rules should correctly predict which sentences would be grammatical in a particular language. Generative Grammar led to accounts of human language which, according to Chomsky (2005, 8), offered greater descriptive adequacy than anything which had come before. A theory of language which is descriptively adequate is one which is able to accurately describe all of the possible sentences which a generative language system is attested to produce while ruling out those sentences which are not attested in that language. However, in many cases, this led to the formation of numerous, highly construction specific, stipulative rules (Radford, 2004, 9). While these rules could describe the functioning of human language, they suggested a system which was thought to be far too complex to plausibly exist in the mind of a speaker. Due to the nature of the generative system which Generative Grammar proposed, the framework was said to lack explanatory adequacy, as it was unable to explain how FL might come about (Smith, 2004, 59).

The development of Generative Grammar into the Minimalist Program was caused by the desire to come up with a theory of language which went beyond explanatory adequacy. A theory of language which is explanatorily adequate is one which is descriptively adequate yet simple and principled enough to be able to exist in the mind of a speaker and be learnable by a child (Chomsky, 1995, 3). In addition, an

explanatorily adequate theory of language would ideally be a theory which is supported by neurolinguistic and psycholinguistic evidence.

2.3 S_0

In the MP, a particular I-language, L , emerges from genetically determined Universal Grammar (i.e. the starting point for language acquisition, and the yet to be fully realised FL, is UG). This initial state is referred to as S_0 and is thought to be more or less uniform across humanity (Chomsky, 2004, 104).

In terms of the study of S_0 , Chomsky (2004, 106) breaks S_0 down into three parts. These are the following:

- (1)a. Unexplained elements of S_0
 - b. Interface Conditions (IC)
 - c. General properties

The contents of (1)a are aspects of the structure and use of language which are specific to FL and which cannot be explained as aspects of other mental systems or as general properties of organic systems (Chomsky, 2004, 106). In a previous version of generative grammar, i.e. the Principles and Parameters framework, (1)a was thought to contain a rich set of principles which were universal to all natural languages (see Chomsky (1981) for the original formulation of Principles and Parameters). However, one of the defining aspects of the Minimalist Program is the attempt to shift the contents of (1)a into (1)b and (1)c. In other words, the MP attempts to show that many of the aspects of the structure mechanics of language are in fact not specific to FL but are instead products of the Interface Conditions or the general properties of organic systems, such as efficient computation (Chomsky, 2004, 106). According to Chomsky (2004, 106), the strong minimalist thesis (SMT) is that (1)a is empty and that all aspects of language which

have heretofore escaped principled explanation can actually be explained as aspects of (1)b and (1)c.

L does not work alone in the mind of the speaker and it must communicate, or interface, with other mental systems. According to Chomsky (2004, 106), “for language to be usable at all, [...] the information in the expressions generated by L must be accessible to other systems.” This is the interface condition of (1)b, which states that the expressions generated must be legible to the Sensorimotor (SM) and Conceptual-Intentional (C-I) systems. The C-I is the realm of thought and meaning, and the S-M system is the realm of action in the form of articulation and perception (A-P) (Chomsky, 1995, 2).

The general properties of organic systems are responsible for the form which an L can take. These properties are physical, chemical and mathematical properties which are involved in the development of organic systems. In terms of the evolution of the genetic component of S_0 , Chomsky claims that natural selection can only work within the limited set of options which are allowed for by natural law (2004, 105). In this way, S_0 itself is a product of the general properties of organic systems and the constraints which these properties place on organic systems' evolution. But an individual's I-language is also subject to constraints based on the properties of organic systems. Because S_0 is genetically determined, it limits the possible states which FL can assume. Each of the possible states which FL could assume is a possible L, but this range of possible Ls is limited in that each L is a product of S_0 and can only develop along the lines which S_0 makes available. Along with this idea that L must belong to a limited set of forms because its foundation is genetically hardwired, is the intuition that natural systems are perfect (Chomsky, 2004, 105). This means that L must be the optimal solution to the requirements imposed by the C-I and SM interfaces, or in other words, that L is the best, most efficient way to meet the needs of the conceptual-intentional and sensorimotor systems (Chomsky, 2004, 106). For the MP, this notion of efficiency plays out as the assumption that language should not contain many highly stipulative rules. Instead, the MP seeks to posit as few rules and operations as possible while still maintaining

descriptive and explanatory adequacy. In other words, L is efficient by making maximum use of minimal means.

In previous frameworks, these notions manifested as, “‘best theory’ considerations,” (Chomsky, 2004, 105). This is the assumption that, out of several theories which describe a particular phenomenon in language, the theory which assumes the most efficient or elegant explanation with the fewest special or additional rules is taken to be correct. But for the MP, the idea that language is perfect is a cornerstone hypothesis. It is, in the first place, a key idea behind the search for explanatory adequacy but it is also the driving notion behind the strong minimalist thesis. In Chomsky’s terms, the MP has brought the study of language to the point where it may be possible to move, “beyond explanatory adequacy” (2004, 106). In other words, while having just a few language specific, stipulated rules in (1)a would not be a problem for explanatory adequacy, a more ideal system may not require even these and so the SMT seeks to find out if (1)a is indeed empty.

2.4 I-Language

An individual’s experience of the world interacts with S_0 to bring about an I-language. Through exposure to language, S_0 maps primary linguistic data to L (Chomsky, 2004, 104). Languages can be said to be made up of properties called features. These features, which specifically are phonetic and semantic features, are symbolic objects (Chomsky, 2001b, 10). Phonetic features involve the pronunciation of linguistic material while semantic features have to do with the meaning of linguistic material. The range of features which can exist in language is constrained by S_0 . L selects a subset of these possible features and stores them in the lexicon (LEX) (Chomsky, 2004, 106) as lexical items (LIs). Each of these LIs is usually made up of both phonetic and semantic features. Words, such as common nouns or verbs, are examples of lexical items.

As a computational system, L uses LIs to produce derivations which are phrases or sentences. At the start of a derivation, L selects the necessary LIs from LEX. This selection is referred to as a lexical array or numeration (Chomsky, 2004, 107).

According to Chomsky, L consists of three major components. The first of these is the narrow syntax (NS) which is the part actually responsible for mapping the lexical array to a derivation (Chomsky, 2004, 107). The completed derivation consists of phonological features and semantic features. These features need to be sent to their respective interfaces in order to be interpreted. The phonological component (Φ) maps the derivation from NS to S-M and the semantic component (Σ) maps the NS derivation to C-I (Chomsky, 2004, 107). An operation called Transfer hands the derivation produced by NS over to Φ and Σ . Chomsky claims that Σ is uniform across all I-languages (in other words, the semantics of all languages behave in the same way) while Φ is subject to a great degree of variation between I-languages (and is thus a source of linguistic variation) (Chomsky, 2004, 107). An influence of the (1)c notion of efficiency is that NS is assumed to be subject to the inclusiveness condition. This condition essentially states that the lexical array must contain all the LIs needed throughout the derivation, so that NS only needs to access LEX once. However, Φ and Σ may still need to access LEX again (Chomsky, 2004, 107). Φ is responsible for Spell-Out (S-O), where the derivation is actually pronounced. Perhaps the most important aspect of S-O is that the hierarchical structure produced by NS must be linearised into a string (Chomsky, 2004, 110). Σ is responsible for meaning and interpretation, for example in thematic relations and operator variable constructions (Chomsky, 2004, 110).

If the derivation produced by L satisfies the interface conditions, that is, if all the features of the derivation are interpretable at their respective interfaces, then the derivation is said to converge. If the derivation contains uninterpretable features, then the derivation will crash at one of the interfaces (Chomsky, 2004, 106). Most features within the derivation are interpretable, however, some features enter the derivation as uninterpretable features while other features are only valued during the course of the derivation and are uninterpretable until they have been valued. During the derivation, these features must be eliminated by being checked or valued in order for the derivation to converge. The elimination of uninterpretable features is achieved via the operation

Agree, which is discussed below. The case feature of determiner phrases is an example of a feature which is uninterpretable when it enters the derivation and must be checked.

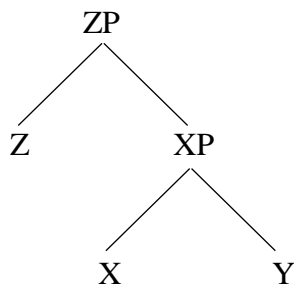
Another key idea of the Minimalist Program is that the derivation is not produced in one fell swoop. Instead it happens in chunks or units called phases. The idea of phases accounts for the fact that empirically there are boundaries in the derivation across which operations like Agree cannot operate (Chomsky, 2008, 143). Chomsky has suggested that phases allow for more efficient computation by reducing the load on working memory as it only needs to handle smaller units of information (Chomsky, 2007, 24). Assuming that these boundaries are determined by phases also allows for NS, Φ and Σ to operate cyclically (Chomsky, 2004, 107). After NS has completed the first unit of the derivation, Transfer hands it over to Φ and Σ . Thereafter, NS immediately moves on to the next cycle while Φ and Σ process what has been handed over to them (Chomsky, 2004, 107). Phases coincide with the merger of certain syntactic heads in the derivation. These phase heads are the light verb (v) and the complementiser (C) in finite clauses. Once the phase head is merged, the phase is complete. The only part of the completed phase which is visible to the next phase is the edge of the completed phase (the phase head and its specifiers). This is known as the Phase Impenetrability Condition (PIC) (Chomsky, 2004, 108).

2.5 Narrow Syntax

Having discussed L in a more general fashion, I now turn my attention to a more fine-grained look at NS. There are three key operations which make up NS, these are Merge, Move and Agree. In terms of keeping the number of operations which make up NS to a minimum (in accordance with (1)c), Merge is the most basic and most central operation of NS. In Chomsky's terms, it "comes free," (2004, 108) with regard to efficiency as it is the minimum requirement for NS to function. Merge is responsible for building syntactic structures from LIs in the lexical array (Chomsky, 1995, 226). Merge is binary, taking two LIs and combining them to form a syntactic object (Chomsky, 2013, 40). Merge is also recursive, being able to take the syntactic object which it has built as

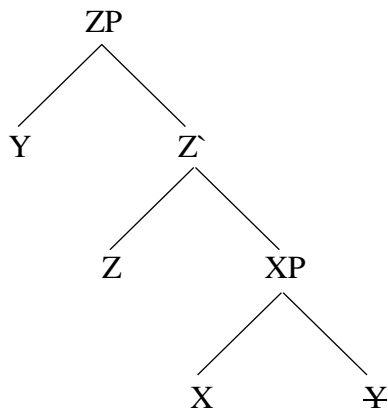
one of its inputs for building further syntactic objects (Chomsky, 1995, 226). The ability to use Merge recursively accounts for the fact that L is able to produce discrete infinity using a more or less finite number of LIs from LEX (Chomsky, 2013, 35). In (2) Merge takes X and Y and creates an X phrase (XP) (a syntactic object) out of them. Merge then takes XP as its input along with Z and creates ZP.

(2)



Move is essentially the same operation as Merge. It only differs from Merge in that it does not take any input from the lexical array but instead builds new syntactic objects from elements already introduced by Merge. Move has been reformulated as Internal Merge (IM) (with traditional Merge now being referred to as External Merge (EM)) and is responsible for the displacement property of language (Chomsky, 2008, 140). This property is found across many, if not all, natural languages and refers to the fact that linguistic elements are sometimes not pronounced in the position in which they are interpreted in the semantic component. The copy theory of movement states that IM does not actually move any elements within the derivation (or remove anything) but instead makes a copy of the apparently moved element. Of the two (or more) instances of the ‘moved’ element, only the highest one is pronounced (Chomsky, 2004, 110). (3) is produced from (2) when IM takes Y and ZP as its arguments. The lower instance of Y has been struck out in order to indicate that it is not pronounced.

(3)



The operation Agree, is responsible for eliminating uninterpretable features of LIs in the derivation (Chomsky, 2004, 113). Agree operates via a Probe-Goal system. An LI with uninterpretable features searches the LI with which it has been merged (its sister) and everything dominated by that LI (the Probe's C-command domain⁹) for a Goal which can value these features. The Goal is an LI which is visible to the Probe by virtue of having uninterpretable features of its own. Such a Goal is referred to as being 'active'. The Probe will agree with the first active Goal which it finds (the least embedded one) (Chomsky, 2004, 113).

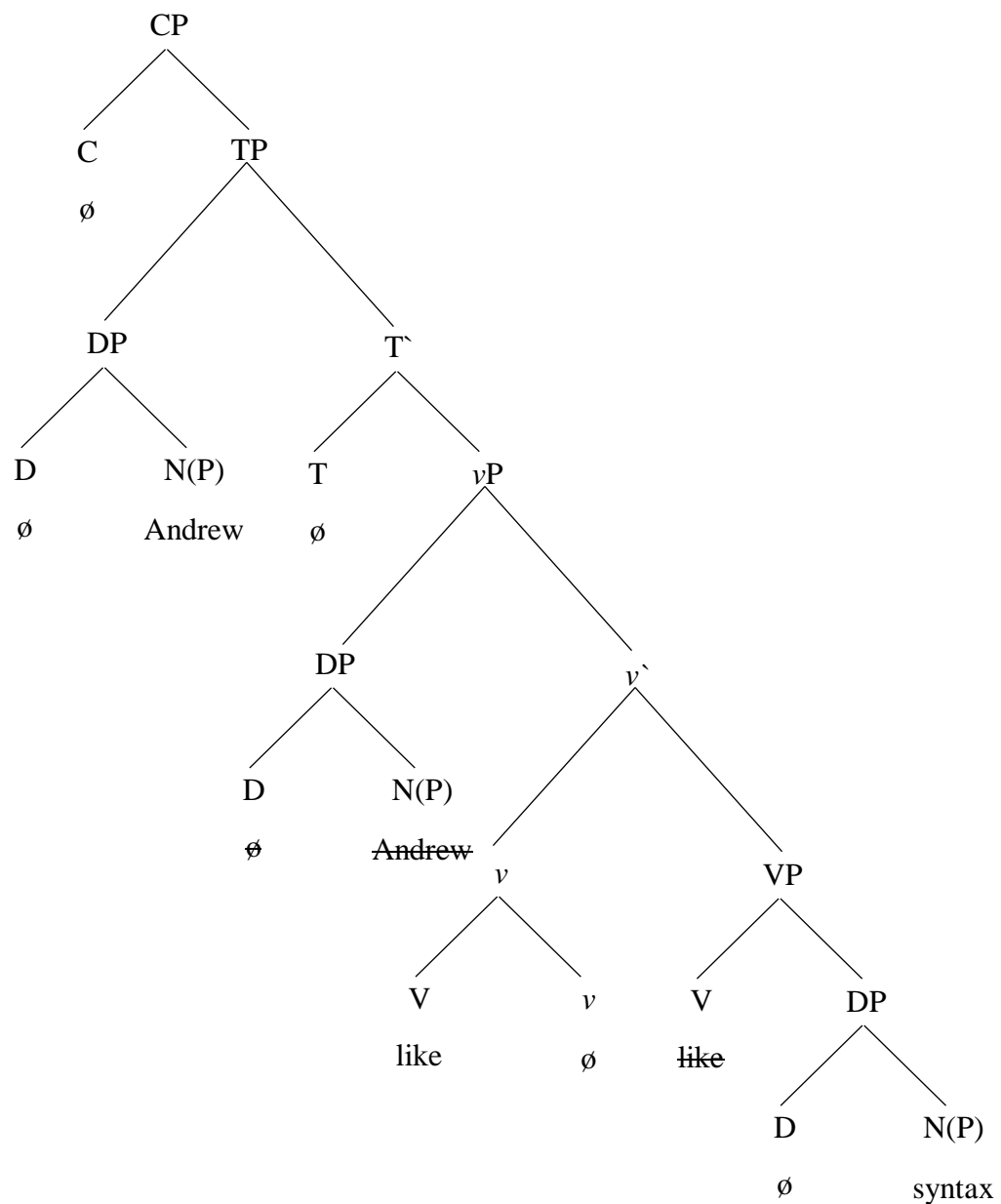
2.6 Example

In the following example, I show more clearly how these operations build a sentence. The sentence in (4) is represented by the syntactic tree in (5)

(4) Andrew likes syntax.

⁹ Carnie (2007, 113) defines C-command as follows: "A node c-commands its sisters and all the daughters (and granddaughters and great-granddaughters, etc.) of its sisters."

(5)



The syntax tree in (5) is built from the bottom up by NS. First, the phonetically null determiner, \emptyset , is merged with the noun, *syntax*, forming a determiner phrase (DP). The determiner is the head of the phrase while the noun is its complement (the notation, N(P), indicates that the noun is in fact a bare phrase on its own). This determiner phrase is then merged with the verb, *like*, to form a verb phrase (VP). Next, the phonetically null light verb is merged with the VP to produce v P. Move then adjoins a copy of the

verb to the light verb.¹⁰ The subject DP (itself formed by merge of a null D and the N(P) *Andrew*) is merged with vP , forming a new vP node, with the old vP becoming v' (i.e. what was a maximal projection becomes an intermediate projection). Since v is a phase head, the first phase is complete at this stage of the derivation, and the complement of v (the VP) is sent to Φ and Σ by Transfer. From now on, only the light verb and the subject are visible to further operations in accordance with the PIC. In a next step, Tense (T) (again null) is merged with vP . T has a valued Tns-feature and unvalued ϕ -features. These unvalued features activate T and act as a Probe searching for a Goal in T's c-command domain. The closest Goal is the valued ϕ -features of the subject DP. Since the subject also has an unvalued case feature, it is active, and therefore enters into an Agree relation with T. T's unvalued ϕ -features are valued by the subject; in return, T is able to assign nominative case to the subject DP because of its valued Tns-feature. As a result of Agree, the uninterpretable ϕ -features of T and the uninterpretable case feature of D can be deleted in the mapping to Σ , although they remain in the mapping to Φ where they may be pronounced as overt agreement or case morphology. Move takes the subject and TP and creates a new TP (with the old TP becoming T') in order to satisfy the EPP feature¹¹ of T.¹² Finally, a null complementiser C (another phase head) is merged with the TP. At this stage the second phase is complete. If the CP in (5) is an embedded clause, then C's complement (the TP), is transferred to the interfaces, and the derivation continues. If the CP in (5) is a root clause, then it is transferred to the interfaces as a whole.

2.7 The MP and Ellipsis

This minimalist approach to the study of language underlies many of the theoretical accounts of ellipsis constructions which I will discuss later in this thesis. What is particularly interesting about all ellipsis constructions, is that while the elided part of

¹⁰ This is an example of head (X^0) movement, where a head moves and is adjoined to a head in a higher head position.

¹¹ The EPP feature is an unusual feature in that it is deleted not via Agree, but by placing a DP in the specifier of T (either by moving the closest DP or by creating an expletive in [spec, T]) (Chomsky, 1995, 123).

¹² The movement of a phrase into a position associated with an argument is referred to as A-movement (Radford, 2004, 184). A-movement is distinguished from A' -movement in that A' -movement is movement into a position that can be occupied by adjuncts or arguments (Radford, 2004, 320).

such a construction is not pronounced, it is still interpreted at the C-I interface. Merchant's (2001) analysis of VP-ellipsis and sluicing assumes that seemingly missing elided material is in fact still generated in NS but is not pronounced due to a special ellipsis feature which is active at Φ . The non-pronouncement of the elided material is thought to follow from the deaccenting of given material which I will discuss further in section 3.1.1. Ellipsis is licensed in the first place by the presence of certain semantic features which denote givenness or pertain to focus, features which are active at Σ . A key assumption that underlies most of the analyses of ellipsis that will be discussed in this thesis is that the ellipsis site contains fully articulated syntax. Showing that Merge, Move and Agree interact with the 'hidden' content of the ellipsis site is therefore important for defending this claim. For example, with Agree, a Probe outside of the ellipsis site can agree with a Goal within the ellipsis site. Movement and the restrictions on movement caused by islands also provide evidence that the ellipsis site contains fully articulated syntax. The ATB movement analysis of gapping constructions by Johnson (2008b) places special reliance on Move.

3 VP-ellipsis

3.1 VP-ellipsis in English

3.1.1 Introduction

In this section, I give a general outline of the fundamental research questions surrounding VP-ellipsis, which seek to find what VP-ellipsis is and how it works. (1)a and b are examples of VP-ellipsis. In both examples, the VP (i.e. the verb and everything following it, except the word *too*) has been elided. Another important property of VP-ellipsis in English is that the ellipsis site is always preceded by an auxiliary or modal verb. In (1)a, the ellipsis site is immediately preceded by the word *did* while in b, *will* immediately precedes the ellipsis site.

- (1)a. John read the newspaper and Andrew did ~~read the newspaper~~ too.
 b. Matthew will go to the movies and Andrew will ~~go to the movies~~ too.

Section 3.1.2 concerns the content of ellipsis sites. On the surface, something which has been elided appears to be entirely gone but this section investigates arguments which claim that there is something within an ellipsis site, with a focus on those arguments that claim that there is syntactic content within the ellipsis site. Section 3.1.3 delves into the issue of identity and covers some of the key arguments around whether the relationship between an ellipsis site and its antecedent is of a syntactic or a semantic nature. The topic of section 3.1.4 is licensing. In this section I go over the evidence that VP-ellipsis can only occur (be licensed) in certain syntactic contexts. This section also includes evidence which suggests that it is more than just the VP which is elided under VP-ellipsis.

3.1.2 Content of the Ellipsis Site

An important question in VP-ellipsis research and in ellipsis research in general is the question of exactly what, if anything, is contained within an ellipsis site. Phrased

another way, it is the question of what form (again, if any at all) the elided material takes. This question is very closely tied to the so-called identity requirement and the licensing of VP-ellipsis as these issues hinge on what is contained within the ellipsis site. According to Johnson (2008a, 4), there are two main approaches in the literature with regard to the content of ellipsis sites. The first approach is to treat the elided material as some form of silent pronoun like those that exist in pro-drop languages (Johnson, 2008a, 4). The second approach is to treat the elided material as if it were a fully-fledged structure produced by the grammar, with the exception that it is not pronounced by the phonological component (Johnson, 2008a, 4). This means that the elided material should still be syntactically present.

The first approach notes that just as a pronoun takes its meaning from an antecedent, so the elided section of a VP-ellipsis construction also takes its meaning from an antecedent (Johnson, 2008a, 4). The idea here is that elided material is in the form of a pronoun which lacks phonetic features and is therefore silent. Lobeck (1995) takes this approach in her analysis of VP-ellipsis. According to her, the elided material is a kind of empty category. More specifically, this empty category is a non-arbitrary, empty, ‘non-NP’ pronominal (Lobeck, 1995, 36). She uses *pro*, familiar as the NP-*pro* from pro-drop languages, to represent this empty pronominal, giving examples like (1) above the representation in (2). According to this approach, *pro* in (2) is a null pronominal whose antecedent is the VP *read the newspaper*:

(2) John read the newspaper and Andrew did *pro* too.

The second approach assumes that the elided material has not been removed and that it has not been subsumed under some empty category. Instead, it remains fully fledged in the syntax and only ‘goes missing’ in the phonological component (Johnson, 2008a, 4). This approach takes advantage of a different kind of anaphoric relation within the grammar, namely that which allows certain information to be marked as given and subsequently deaccented (Johnson, 2008a, 5). Given information is information which has already been introduced in the discourse, and Tancredi (1992, 2) defines

deaccenting as the removal of a phonological (pitch) accent from a constituent. The parts of a sentence which are given are deaccented as indicated by the use of italics in the second sentence of (3) (Johnson, 2008a, 5).

- (3) Andrew drives a new car.
 No, *Andrew drives an OLD car.*

In the second sentence, the words *Andrew, drives, an,* and *car* are deaccented as this information has already been supplied by the first sentence of this example. The word *old* is new information and so it is not deaccented (Johnson, 2008a, 5); instead, new information is focused and phonologically emphasised. The crucial observation here is that the elided material in VP-ellipsis is always given material (Merchant, 2001, 10). It has therefore been suggested that VP-ellipsis is a type of, “radical,” deaccenting where elided material has been ‘deaccented’ right into silence (Johnson, 2008a, 6). This would mean that while the elided portion of a sentence is not pronounced, nothing has changed the syntactic structure of the sentence.

However, showing that there is a close relationship between what can be deaccented and what can be elided is not enough to show definitively that the elided material maintains its syntactic content. In order to do this, linguists have sought to show that elided material can still be targeted by the syntactic operations of agreement and movement (van Craenenbroeck, 2017, 2). In the following expletive constructions ((4)a to d), adapted from van Craenenbroeck (2017, 2), number agreement on the verbs *was* and *were* is controlled by the subjects *a pianist* and *pianists* (respectively) in the embedded sentence.

- (4)a. I didn’t think there would be a pianist at the party, but there was_[s] a pianist_[s] at the party.
 b. *I didn’t think there would be a pianist at the party, but there were_[p] a pianist_[s] at the party.

- c. I didn't think there would be pianists at the party, but there were_[p] pianists_[p] at the party.
- d. *I didn't think there would be pianists at the party, but there was_[s] pianists_[p] at the party.

In the ellipsis constructions in (5), which correspond to the non-elliptical examples in (4), we see that the number agreement on *was* and *were* is maintained in spite of the seeming absence of the noun controlling that agreement.

- (5)a. I didn't think there would be a pianist at the party, but there was_[s] ~~a pianist_[s] at the party.~~
- b. *I didn't think there would be a pianist at the party, but there were_[p] ~~a pianist_[s] at the party.~~
- c. I didn't think there would be pianists at the party, but there were_[p] ~~pianists_[p] at the party.~~
- d. *I didn't think there would be pianists at the party, but there was_[s] ~~a pianist_[s] at the party.~~

(van Craenenbroeck, 2017, 2)

This is taken as an indication that the syntactic structure of the elided part of the sentences in (5) is really still there and contains the nouns *pianist* or *pianists*, which still control agreement on *was* and *were* (van Craenenbroeck, 2017, 2).

Having shown that agreement can be controlled from within an ellipsis site, I now proceed to the issue of movement. The possibility of extracting out of ellipsis sites has been explored in depth in the literature (van Craenenbroeck and Merchant, 2013, 704). There are different types of movement that are found to take place from an ellipsis site.

Head (X^0) movement out of ellipsis sites is attested in languages with V-to-T movement. In languages such as Irish, Hebrew and the Bantu language Ndendeule,

(among others) (van Craenenbroeck and Merchant, 2013, 704), head movement rescues the main verb from the ellipsis site. In (6), from Ngonyani and Githinji (2006, 39), the verb *gula* in the second conjunct is still present even though the VP has been elided, as it has escaped the ellipsis site. This construction, which is known as “verb-stranding VP-ellipsis,” is not attested in English, with the exception of possessive *have* in British English, which is able to move to T (van Craenenbroeck and Merchant, 2013, 715). Verb-stranding VP-ellipsis will be the topic of section (3.2) and will not be discussed further in this section.

- (6) Juma i-gula nyumba na Amina i-gula mewa. Chingoni
 Juma SM-buy 9house and Amina SM-buy also
 ‘Juma is buying a house and Amina is too.’

Van Craenenbroeck and Merchant (2013, 706) note that VP-ellipsis is possible in passives ((7)a), unaccusatives ((7)b) and raising constructions ((7)c) (their examples). These are all constructions involving A-movement of a VP-internal argument to the VP-external subject position [Spec, T], indicating that moving a DP out of the elided VP is grammatical.

- (7)a. John was arrested and Bill was ~~arrested~~ too.
 b. John arrived at the party before Nikita did ~~arrive at the party~~.
 c. John seems to be happy, but Mary doesn’t ~~seem to be happy~~.

To complete the discussion on extraction from ellipsis sites, I now turn to A`-movement. Van Craenenbroeck and Merchant (2013, 706) note that A`-movement out of ellipsis sites is grammatical, but also more restricted than X⁰ and A-movement. Their examples (8)a to d show that *wh*-movement, topicalisation, relativisation and quantifier raising can all take place out of ellipsis sites. In (8)a, a *wh*-phrase has been extracted out of the elided VP in the second conjunct. In b the DP *tomatoes* has been topicalised and has moved out of the elided VP. In c, the relativized DP *the ones* (or the corresponding relative operator) has been extracted from the ellipsis site, and in d, the QP *every patient*

has moved out of the ellipsis site via quantifier raising so that it can take scope over the subject DP of the elliptical clause.

- (8)a. I know which books you like and which ones you don't ~~like~~.
 b. Potatoes I like, but tomatoes I don't ~~like~~.
 c. Give me the books you like and the ones you don't ~~like~~.
 d. A nurse will examine every patient and a doctor will ~~examine every patient~~ too.

In all these examples there is a contrast between a constituent in the antecedent clause and a constituent in the clause that hosts the ellipsis site (van Craenenbroeck and Merchant, 2013, 706). In (8)a for example, *like* is contrasted with *don't like*. For A'-movement out of a VP-ellipsis site to be grammatical, there must be a contrast between the two clauses. Specifically, the contrastively focused element must be within the c-command domain of the A'-extracted element. In (9), from van Craenenbroeck and Merchant (2013, 706), we see that a lack of contrastive focus makes (9)a ungrammatical but (9)b, which places contrastive focus on the subjects (with the subject of the antecedent clause, *Ed*, being contrasted with that of the ellipsis containing clause, *Mary*), is acceptable.

- (9)a. * They attended a lecture on a Balkan language, but I don't know which they did ~~attend a lecture on~~.
 b. ED attended a lecture on carpentry, but I don't know what MARY did ~~attend a lecture on~~.

(9)b is also important as evidence against the proform approach as it is an example of an interrogative pronoun binding into an ellipsis site. This is not an issue if the ellipsis site contains normal syntactic structure, but it is an issue if the ellipsis site is analysed as a pronoun, as there is nothing in the ellipsis pronoun which the interrogative pronoun can bind into (Johnson, 2008a, 5). A different type of example which is also taken as

evidence of ellipsis sites containing syntactic structure is shown in (10) from van Craenenbroeck and Merchant (2013, 707).

- (10)a. *BEN will be mad if Abby talks to Mr Ryberg, and guess who CHUCK will be mad if Abby talks to.
- b. *BEN will be mad if Abby talks to Mr Ryberg, and guess who CHUCK will ~~be mad if Abby talks to~~.

(10)a is ungrammatical, because it involves A'-extraction out of an island. As b shows, this ungrammaticality remains even when the island is not visible due to ellipsis. This is taken as an indication that the island is still present in its syntactic form, even if it is not pronounced (van Craenenbroeck and Merchant, 2013, 707).

In general, the arguments in favour of ellipsis sites containing full syntactic structure seem to me to be quite strong. They also dominate the more recent literature. Therefore, I adopt this approach in the remainder of this thesis, and each of the arguments presented in the following section on identity works on the underlying assumption that ellipsis sites do contain fully fledged syntactic structure.

3.1.3 Identity

Identity concerns the extent to which an ellipsis site matches its antecedent. This particular area of research is also sometimes referred to as recoverability, following the assumption that the 'missing' meaning of the elided portion of a construction is derived (i.e. recovered) from the meaning of its antecedent. According to van Craenenbroeck and Merchant (2013, 711), the central issue surrounding identity is the question of whether it is the semantic or the syntactic component of the grammar which handles identity. In other words, do the antecedent and the ellipsis site have to match in terms of structure or in terms of meaning? They note that the main approach towards answering

this question involves seeing what, if any, semantic or syntactic mismatches can be tolerated in ellipsis constructions.

Van Craenenbroeck and Merchant (2013, 710) first note that the linear surface representation of a construction does not enter into the question of identity. As their example (11)a shows, homophony of the words *right* and *write* in an otherwise identical ellipsis site and antecedent produces an ungrammatical sentence. On the other hand, (11)b is grammatical despite the fact that the verb in the antecedent is *played* while the elided verb is *play*. This clearly shows that ellipsis constructions can be grammatical even when the ellipsis site is not “string identical” (i.e. not an exact word-for-word match) (van Craenenbroeck and Merchant, 2013, 710) to its antecedent.

- (11)a. *Injustices he rights but books he doesn't ~~write~~.
- b. Emily played beautifully at the recital and her sister will ~~play beautifully at the recital~~ too.

Having shown that identity between ellipsis site and antecedent is not constrained by strict surface identity, van Craenenbroeck and Merchant (2013) go on to discuss four types of mismatches which are prevalent in the ellipsis literature. The idea behind studying these mismatches is the following. If a mismatch in structure (not affecting truth-conditional meaning (van Craenenbroeck, 2017, 12)) between the elided material and its antecedent is tolerated, while a mismatch in meaning is not, then this suggests that VP-ellipsis requires there to be a semantic match between the elided material and the antecedent. If differences in meaning are tolerated while differences in structure are not, this implies that the identity requirement is syntactic (van Craenenbroeck and Merchant, 2013, 711).

Mismatches between the morphology of the elided verb and its antecedent yield mixed results and the interpretation of these results is also somewhat mixed (van Craenenbroeck and Merchant (2013, 712)). As van Craenenbroeck's (2017, 13)

examples in (12) show, some mismatches are tolerated while others are not. In (12)a, the elided verb is of the form *work*, while its antecedent is *worked* and in (12)b, the elided verb is *sing* while its antecedent is *sang*. However, in (12)c the mismatch between *was* and the elided *be* is not tolerated (see (30)c and d for evidence that it is possible to elide *be* in the first place).

- (12)a. John worked very hard and Paul will ~~work very hard~~ too.
 b. John sang very loudly and Paul will ~~sing very loudly~~ too
 c. *John was here and Paul will ~~be here~~ too.

For those who support the idea of syntactic identity, the argument goes as follows. Lexical verbs like *work* and *sing* enter the derivation uninflected and only gain inflections at some point later on in the derivation. This means that for at least part of the derivation, the lexical verbs in the antecedent and the ellipsis site are in their bare form and are identical, so there is no morphological violation at this point. Citing Lasnik (1995), van Craenenbroeck and Merchant (2013, 711) state that functional verbs (i.e. auxiliaries and modals) on the other hand, enter the derivation fully inflected and so at no point are *was* and *be* identical. This means that the source of the ungrammaticality of (12)c is the morphological mismatch. Potsdam (1997, 360) however, presents the examples in (13)a to d where a mismatch between functional verbs is not ungrammatical.

- (13)a. He might be attending AA sessions, I know his mother has been attending AA sessions.
 b. He might be attending AA sessions, I know his mother has.
 c. John may be questioning our motives, but Peter hasn't been questioning our motives.
 d. John may be questioning our motives, but Peter hasn't.

As the unelided examples show, the elided examples contain a mismatch between *be* in the antecedent and *been* in the ellipsis site. These sentences are nevertheless

grammatical, suggesting that morphological mismatches are tolerated and that the ungrammaticality of (12)c must come from some other source. According to Potsdam (1997, 362) examples like (12)c are ungrammatical because of a mismatch involving traces of movement. In (12)c, the copula *was* has moved from V to I, leaving a trace (or copy) behind in V. However, the non-finite auxiliary *be* in the ellipsis site has not moved. This leads to a mismatch between the X^0 trace in the antecedent and the unmoved non-finite verb in the ellipsis site, with Potsdam (1997, 362) suggesting that the X^0 trace is not interpreted as part of the ellipsis site. Van Craenenbroeck and Merchant (2013, 711) note that it is not clear whether this trace mismatch constitutes a syntactic or a semantic mismatch. At the very least it makes the argument about lexical versus functional verbs moot but van Craenenbroeck and Merchant (2013, 712) state that it is not clear how Potsdam's (1997) data should swing the debate between semantic and syntactic identity.

Another type of mismatch under ellipsis which has been studied is active and passive mismatches. It is possible, in some contexts, to have VP-ellipsis with an active antecedent and a passive ellipsis site or vice versa. The following examples from Merchant (2013, 78) show that ellipsis constructions with a passive antecedent and an active ellipsis site ((14)b) and constructions with an active antecedent and passive ellipsis site ((14)a) are both possible.

- (14)a. The janitor must remove the trash whenever it is apparent that it should be ~~removed~~.
 b. The system can be used by anyone who wants to ~~use the system~~.

Active and passive sentences differ in their syntax. In active sentences the subject is the external argument of the verb, but in passive sentences the subject is the internal argument of the verb, and the verb does not take an external argument. However, the truth-conditional semantics of active and passive sentences are identical (van Craenenbroeck and Merchant, 2013, 712). For these examples then, we seem to have a clear case of a syntactic mismatch (which does not affect the semantic interpretation)

which does not cause ungrammaticality, suggesting that the identity requirement is semantic.

But this is not the whole picture. When examining sluicing examples such as (15), which I will discuss in more detail in chapter 4, Merchant (2013, 81) finds that active-passive mismatches are not tolerated in sluicing.

- (15)a. *Someone murdered Joe, but we don't know by who ~~Joe was murdered~~.
 b. *Joe was murdered, but we don't know who ~~murdered Joe~~.

In, (15)a, the mismatch between the active antecedent and the passive ellipsis site results in ungrammaticality and in b, the antecedent is passive while the ellipsis site is active. As the active-passive mismatch is syntactic and not semantic, the ungrammaticality of the sluicing examples in fact suggests that syntactic mismatches are not tolerated in ellipsis. Merchant (2013, 89) concludes that the head responsible for differentiating active from passive (i.e. Voice) lies outside the ellipsis site in VP-ellipsis¹³ but within the ellipsis site in sluicing, where the entire TP is elided. This means that under Merchant's (2013) analysis, the antecedent clause and the ellipsis site are syntactically identical in VP-ellipsis, but sluicing, where the voice mismatch occurs within the ellipsis site, shows that syntactic mismatches are not tolerated in ellipsis in general. Voice mismatches in VP-ellipsis, which at first glance seem to support a theory of semantic identity, actually provide a strong argument in favour of syntactic identity when interpreted in the light of data from sluicing (van Craenenbroeck and Merchant, 2013, 713).

Mismatches involving negative polarity items are the next set of mismatches discussed by van Craenenbroeck and Merchant (2013, 713). The unelided version of (16)a must

¹³ At this stage I wish to highlight that suggesting that the ellipsis site in VP-ellipsis is smaller than the Voice phrase stands in contrast to a point which will be made in 3.1.4, where it is suggested that VP-ellipsis probably targets a phrase larger than Voice.

be (16)c and not (16)b and the same goes for the examples in (17) ((17)b is grammatical but does not mean the same thing as (17)a).

- (16)a. John didn't see anyone but Mary did.
 b. *John didn't see anyone but Mary did see anyone.
 c. John didn't see anyone but Mary did see someone.

- (17)a. John saw someone but Mary didn't.
 b. John saw someone but Mary didn't see someone.
 c. John saw someone but Mary didn't see anyone.

In these examples, the negative polarity item *anyone* does not match *someone*. According to van Craenenbroeck and Merchant (2013, 713), it is possible to argue that *anyone* and *someone*, which both correspond to an existentially bound variable, have the same semantics but it is harder to say whether or not they are syntactically identical, with one line of reasoning being that the difference between the feature specification of the polarity feature for *someone* and for *anyone* creates the syntactic mismatch. This supports the idea that the identity relation between an ellipsis site and its antecedent is semantic in nature (van Craenenbroeck and Merchant, 2013, 713). However, van Craenenbroeck and Merchant (2013, 713) also point out that it is possible to treat these items as inherently unvalued for polarity, and to postulate a higher functional head outside of the ellipsis site that values their polarity. Such an analysis would remove the syntactic mismatch by placing the differing polarity features outside the ellipsis site, and would rescue the syntactic approach to identity. The strategy to rescue the syntactic approach to identity in the face of counterevidence like that discussed above is always the same. If the feature value of a particular element would cause a mismatch, then elements in the ellipsis site and its antecedent must be inserted in their "bare" form and receive a formal value only from higher functional heads that are located outside the ellipsis site. An elided VP then, always represents material in its bare form, and therefore is always formally identical to the corresponding material in the antecedent clause.

The last example from van Craenenbroeck and Merchant (2013, 714) involves mismatches between proper nouns and pronouns. While the antecedent for the ellipsis site in (18)a contains the name *Alex*, the unelided example, (18)b, shows that this proper noun cannot be in the ellipsis site. Instead, the ellipsis site must be understood to contain the pronoun *him* for the sentence to be grammatical, as (18)c shows. Assume that in these examples *he* always refers to *Alex*.

- (18)a. They arrested Alex_i, even though he_i thought they wouldn't.
 b. *They arrested Alex_i even though he_i thought they wouldn't arrest Alex_i.
 c. They arrested Alex_i even though he_i thought they wouldn't arrest him_i.

(18)b is ungrammatical because it violates condition C of the Binding Theory. The condition states that an R-expression α with index i may not be c-commanded by any expression β with index i in an A-position. In (18)b, *Alex* and *he* both have the same index and *Alex* is c-commanded by *he* (Merchant, 2001, 24). A process referred to as 'vehicle change', originally conceived of by Fiengo and May (1994), is assumed to change *Alex* into *him* in order to rescue the derivation of (18)a. Van Craenenbroeck and Merchant (2013, 714) point out that, when co-indexed, *Alex* and *him* arguably have the same semantic denotation and that the ellipsis site and its antecedent are therefore semantically identical. They note that on the other hand, the syntax of proper nouns and pronouns is different, producing a syntactic mismatch. This example is one of the few which stand uncontested in their support of a semantic approach to identity (van Craenenbroeck and Merchant, 2013, 714).

While researchers have proposed syntactic and semantic accounts for many of these examples, there are some sets of data which both semantic and syntactic identity theories have trouble accounting for. One example of this involves ellipsis constructions which have no linguistic antecedent (van Craenenbroeck, 2017, 15). The only 'antecedent' for the following examples is the pragmatic information given in square brackets.

- (19)a. [Andrew accidentally bumps into someone in a crowded supermarket aisle.]
Andrew: Sorry! I didn't mean to.
- b. [In a computer game, Jack's teammates drive off in their car without him.]
Jack: Could you please not?
- c. [Carmen sees her son about to place his hand on a hot stove plate.]
Joseph, don't!

Hankamer and Sag (1976, 392) however show that this “pragmatic control” does not suffice in every example, as shown in (20), where the discourse is ill formed. The examples in (19) do not then constitute a reason to abandon attempts to explain identity as syntactic or semantic matching. However, they do suggest that other factors (such as pragmatics) should also be taken into account.

- (20) [Hankamer attempts to stuff a nine-inch ball through a six-inch hoop.]
Sag: #It's not clear you will be able to.

3.1.4 Licensing

Having an antecedent which makes it recoverable is not enough to ensure that a VP can be elided. As van Craenenbroeck and Merchant (2013, 714) show, certain syntactic conditions must also be met. In the following example from van Craenenbroeck and Merchant (2013, 714), the elided VP should be recoverable, but the sentence is nevertheless ungrammatical.

- (21) **Moby Dick* was being discussed and *War and Peace* was being ~~discussed~~ too.

This example highlights the fact that something other than recoverability must be involved in determining the grammaticality of VP-ellipsis constructions. The key observation here is that modals, certain auxiliaries and infinitival *to* always immediately

dominate the VP-ellipsis site and their presence is necessary for licensing VP-ellipsis in the first place (van Craenenbroeck and Merchant, 2013, 715). Van Craenenbroeck (2017, 20) presents the list of examples (22)a to h. This exhaustive list shows which elements in the extended projection of the verb are able to license VP-ellipsis. Examples (22)f through g confirm that a modal, auxiliary or infinitival *to* is required to license VP-ellipsis, with g showing that (for English), the main verb alone cannot license VP-ellipsis and h showing that causative verbs cannot either.

- (22)a. Madame Spanella would eat rutabagas, but Holly wouldn't ~~eat rutabagas~~.
 b. Madame Spanella has eaten rutabagas, but Holly hasn't ~~eaten rutabagas~~.
 c. Madame Spanella should be eating rutabagas, but Holly shouldn't be ~~eating rutabagas~~.
 d. Madame Spanella is eating rutabagas, but Holly isn't ~~eating rutabagas~~.
 e. Madame Spanella wants to eat rutabagas, but Holly doesn't want to ~~eat rutabagas~~.
 f. *Madame Spanella hasn't eaten rutabagas, but Holly ~~has eaten rutabagas~~.
 g. *Madame Spanella didn't start eating rutabagas, but Holly started ~~eating rutabagas~~.
 h. *Madame Spanella didn't make me eat rutabagas, but Holly made me ~~eat rutabagas~~.

For the ungrammatical example in (21), auxiliaries in the *ing*-form, such as *being* in (21), cannot license ellipsis (van Craenenbroeck and Merchant 2013, 716).

In Lobeck's (1995, 15) account, the *pro* which forms the ellipsis site is an empty category and as such, is subject to her version of the empty category principle (ECP). For our purposes, the important part of the ECP is that empty categories must be properly head-governed in order to be licensed (Lobeck, 1995, 20). The issue of licensing VP-ellipsis can then be reduced to the more familiar issue of licensing any other type of empty category. Head-governors are lexically filled heads, which in the case of licensing the non-arbitrary, non-NP *pro* which forms the ellipsis site, are heads in the inflectional domain (Lobeck, 1995, 19). Modals and auxiliaries fit the role of potential head-governors of *pro*, which explains how they are involved in licensing VP-ellipsis.

To return to the list of examples in (22), (22)e shows that infinitival *to* can licence VP-ellipsis. However, it has also been noted in the literature (see for example Johnson (2001, 440)) that infinitival *to* is somewhat restricted as a VP-ellipsis licenser. This restriction involves the closeness of *to* to the ellipsis site. The following examples are taken from van Craenenbroeck and Merchant (2013, 716) but originally appeared in Lobeck (1995). As (23) and (24)a show, infinitival VP-ellipsis is blocked in adjunct clauses and subject clauses respectively; (24)b shows that a similar construction where infinitival *to* is not embedded in a subject clause is grammatical. (25)a and b indicate that some infinitival *wh*-questions are acceptable while others are not.

(23) *Maggie came to read Fred's story and I also came to ~~read Fred's story~~.

(24)a. *You shouldn't play with rifles, because to ~~play with rifles~~ is dangerous.

b. You shouldn't play with rifles, because it's dangerous to ~~play with rifles~~.

(25)a. *Mary was told to bring something to the party, so she asked Sue what to ~~bring to the party~~.

b. John wants to go on vacation but he doesn't know when to ~~go on vacation~~.

Modal verbs are in fact also subject to some restrictions. Epistemic modals relating to necessity that are directly adjacent to the ellipsis site cannot license VP-ellipsis (as seen in (26)a), while those relating to possibility might be able to ((26)b). (26)c shows that epistemic necessity modals can license VP-ellipsis when not adjacent to the ellipsis site (van Craenenbroeck and Merchant, 2013, 716).

(26)a. *Mary must be a successful student, and they say Frances must ~~be a successful student~~ too.

b. ?Mary must be a successful student, and they say Frances may ~~be a successful student~~ too.

- c. A: I wonder if Mary has already talked to that employee.
 B: She must have ~~already talked to that employee~~ because his desk is already empty.

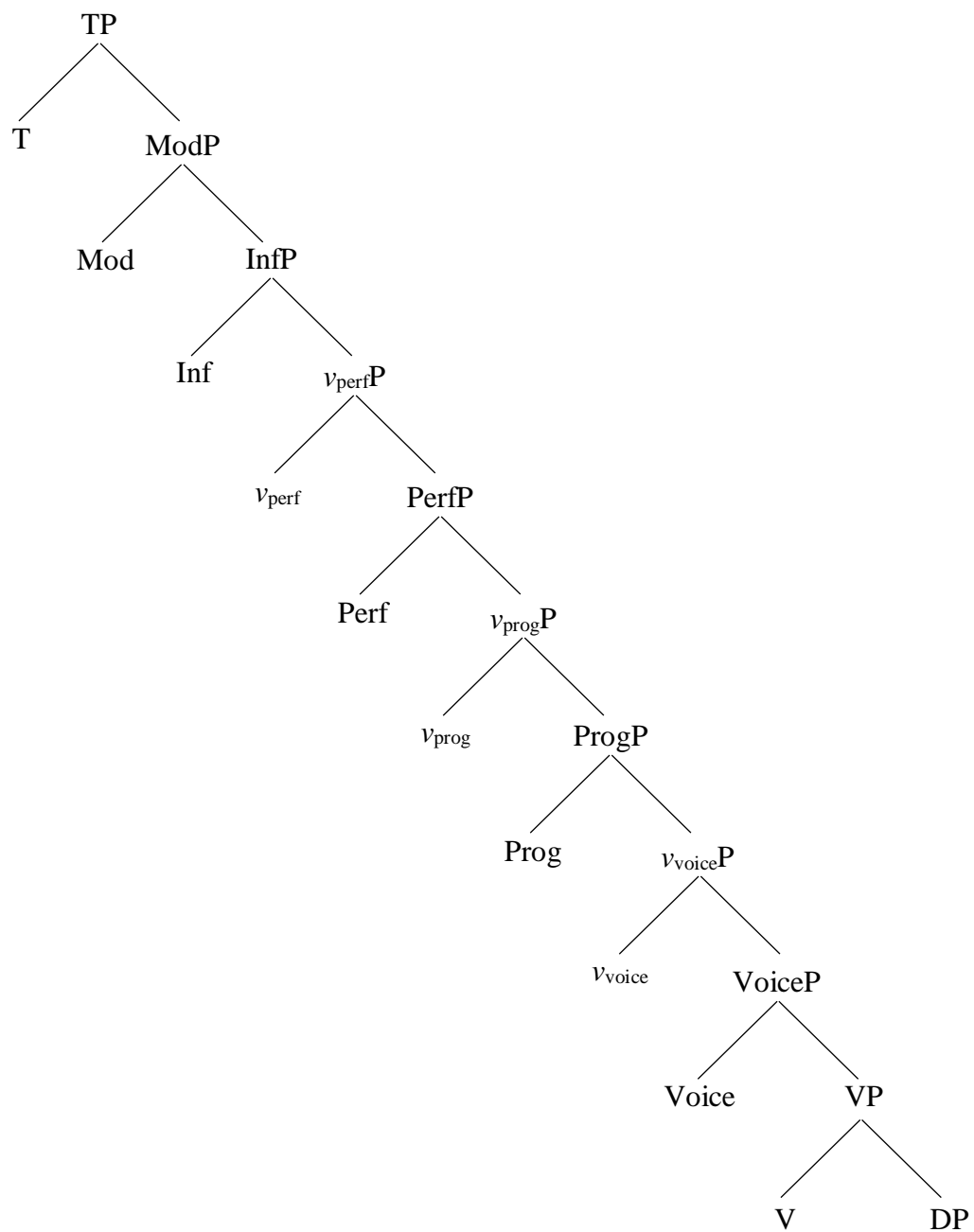
There is another licenser for VP-ellipsis which does not fit in nicely with those discussed so far. Negation is also able to license VP-ellipsis¹⁴ as shown by (27)a and b from van Craenenbroeck and Merchant (2013, 715).

- (27)a. John's happy, but I'm not ~~happy~~.
 b. Ted hoped to vacation in Liberia but his agent recommended that he not ~~vacation in Liberia~~.

As established by more recent advances in generative syntax, the heads which license ellipsis such as modals and auxiliaries each occupy a particular functional head in the range that is the verbal spine (van Craenenbroeck, 2017, 10). (28) shows where each of these elements appears in the extended projection of the main verb. In this system, modals are merged in Mod (and move to T), perfective auxiliaries are merged in v_{perf} (and move to Inf), progressive auxiliaries originate in v_{prog} (and possibly move to Perf) (van Craenenbroeck, 2017, 10), passive auxiliaries in v_{voice} , and infinitival *to* in Inf.

¹⁴ According to van Craenenbroeck (2017, 21), negation is unusual in its ability to license VP-ellipsis as “[negation] is traditionally not assumed to occupy the INFL-position”. This statement is odd as Pollock’s (1989, 397) work on split INFL places negation in the inflectional domain.

(28)



When taken together with the earlier assumption that the auxiliary or modal etc. that immediately precedes the ellipsis site is involved in licensing ellipsis, it may seem strange that the phenomenon of VP-ellipsis is actually licensed by a range of different heads, each of which occupies its own position in the hierarchical structure. One generalisation that can be made for these different licensers for VP-ellipsis is, as van

Craenenbroeck (2017, 22) notes, that the licensing of VP-ellipsis seems to be tied to the overt realisation of Infl.

The tree in (28) and the height of the heads which license VP-ellipsis raise an important question. This question is to do with the size of the ellipsis site. If we still assume that it is the material immediately dominated by the licensing head that is elided, then it is clear that VP-ellipsis always elides more than just the VP. To show just how much structure beyond the VP is being elided, van Craenenbroeck (2017, 9) presents the following examples (which he takes from Aelbrecht and Harwood (2015, 67)). (29) is the antecedent to the ellipsis constructions in (30).

(29) Betsy must have been being hassled in London by the police and I think that

- (30)a. *Peter ~~must have been being~~ hassled in London by the police too.
 b. *Peter must ~~have been being~~ hassled in London by the police too.
 c. Peter must have ~~been being~~ hassled in London by the police too.
 d. Peter must have been ~~being~~ hassled in London by the police too.
 e. *Peter must have been being ~~hassled in London by the police~~ too.
 f. *Peter must have been being ~~hassled in London by the police~~ too.

(30)a and b show that the functional projections which host modals such as *must* and perfective *have* (which resides in Infl after moving out of v_{perf}) are always outside the ellipsis site. (30)e and f show that the functional projection, Prog, which hosts the passive auxiliary *being* (after it has moved there from Voice), and everything dominated by this projection are always within the ellipsis site. The progressive auxiliary *been* is merged in v_{prog} and has moved to Perf in d. The contrast between (30)c and d shows that *been* can optionally be within or outside the ellipsis site (van Craenenbroeck, 2017, 10). This suggests that the highest head elided by VP-ellipsis is optionally v_{prog} or Perf, or alternatively, that it is always v_{prog} that is elided and that movement of *been* from v_{prog} to Perf is optional. Together, these examples show that VP-ellipsis always targets a head at least as high as v_{prog} , but never as high as Infl (van Craenenbroeck, 2017, 10).

3.1.5 Merchant's (2001) Theory of Ellipsis

The particular approach towards analysing VP-ellipsis constructions which I will make use of throughout this thesis is the one laid out in Merchant (2001). While its original instantiation is now in some ways slightly dated, Merchant's (2001) theory of ellipsis is in my opinion still a powerful tool for describing ellipsis from the point of view of the Minimalist framework, as it is able to account for the basic issues of licensing and identity in both VP-ellipsis and sluicing. While some aspects have been reworked by Merchant and others in more recent work (see for example Aelbrecht, 2010), in this section I focus on the core assumptions of Merchant's (2001) account of ellipsis. Based on the evidence and arguments against syntactic identity from examples like those mentioned in section 3.1.3, Merchant (2001, 25) takes a semantic approach towards defining the identity mechanism of VP-ellipsis. Merchant's analysis of VP-ellipsis builds on the analysis of the deaccenting of material that is given, based on work by Schwarzschild (1999). What is particular about Merchant's (2001, 26) approach is that unlike other semantic based approaches of the time, he assumes that the ellipsis site contains fully fledged syntax.

Merchant's (2001, 14) approach is based on the observation that the elided VP in VP-ellipsis must be given information. Given material is material which has already appeared in the discourse. The definition of givenness used by Merchant (2001, 14) is the following:

(31) Givenness:

- i. If a constituent, α , is not F-marked, α must be given.
- ii. An expression E counts as given if and only if E has a salient antecedent A and modulo \exists -type shifting, A entails the F-closure of E.

New information must be F-marked. (31)i means that anything not F-marked is assumed to be given. (31)ii notes that for an expression to be given, it must have an antecedent

and that the F-closure of the antecedent has the same entailment as that of the expression. F-closure is a type shifting operation defined as follows.

(32) F-closure:

The F-closure of α is the result of replacing F-marked parts of α with \exists -bound variables of the appropriate type, modulo \exists -type shifting.

This means that in F-closure, focused material is replaced by an existentially bound variable. I use the following example from Merchant (2001, 15) in order to show how givenness works.

(33) Abby was reading the book while BEN *was reading*.

Ben is written in block capitals to indicate that it is F-marked as it is new information. In this example, our antecedent, *Abby was reading the book*, entails that there is an x such that x was reading. In order to see if *Ben was reading* counts as given, we need to see if the F-closure of this expression matches the entailment of our antecedent. Replacing the F-marked *Ben* with an existential variable gives us ‘ x was reading’. This is a match for the entailment of our antecedent which means that *was reading* counts as given in (33).

Merchant (2001, 60) makes the following suggestion for capturing ellipsis in Minimalist architecture. He suggests that there is a feature which he calls [E] that is responsible for licensing ellipsis. Merchant’s (2001, 60) focus is on sluicing but his theory of ellipsis is developed with VP-ellipsis in mind as well and can be applied to VP-ellipsis. Merchant (2001, 61) states that [E] is responsible for imposing the licensing condition on ellipsis. The most important part of this analysis is that [E] causes its complement (including everything dominated by that complement) to be elided (Merchant, 2001, 60). Merchant (2001, 60) captures the ellipsis operation itself by claiming that [E] instructs PF to not parse [E]’s complement.

While deaccenting is subject to givenness, ellipsis is subject to a more stringent focus condition called e-givenness. Merchant's (2001, 26) definition of e-givenness and the ellipsis-specific focus condition are shown in (34). According to Merchant (2001, 60) [E] is responsible for imposing the focus condition shown in (34)a, thereby licensing ellipsis of structures which are e-given.

(34)a. A VP α can be deleted if and only if α is e-given.

b. e-givenness

An expression E counts as e-given if and only if E has a salient antecedent A and modulo \exists -type shifting,

i. A entails the F-closure of E, and

ii. E entails the F-closure of A.

The essential difference between givenness, which is required for deaccenting, and e-givenness, which is required for ellipsis, is that in givenness, the entailment relation between the elements E and A is one-directional, while for ellipsis it is bi-directional¹⁵. For VP-ellipsis, Merchant (2008, 171) claims that [E] resides on the Voice head which immediately precedes the ellipsis site and licenses the elision of the VP. However, in the previous section, we examined more recent work which suggested that the position of [E] in the extended projection of the verb is somewhat higher than Voice. For the simple example in (35), the ellipsis of the VP *buy a book* is therefore licensed by [E] on Voice, or perhaps on some higher head in the extended projection of the verb. For ellipsis to take place, [E] requires that the F-closure of the antecedent VP entails the (to be) elided VP and that the F-closure of the (to be) elided VP entails the antecedent VP. In the case of (35), moving the subject out of the VP leaves an open variable which must be bound under existential closure (Merchant, 2001, 27). The result of existential closure is the same for both conjuncts, with the resulting expression being that there is an x , such that x will buy a book. In (35), the subject is focused, but Merchant (2001, 27) assumes that

¹⁵ Bi-directional entailment ensures that the match between the antecedent and the ellipsis site is somewhat stricter for ellipsis than it is for deaccenting.

the VP-internal unpronounced copy of the subject is also focused. Replacing the (VP-internal) focused subject with an existentially bound variable produces the expression that there is an x , such that x will buy a book. Again, the result of focus closure is the same in both conjuncts. As the expressions are exactly the same under existential closure and focus closure, it is clear that the antecedent VP entails the F-closure of the elided VP, and that the elided VP entails the focus closure of the antecedent VP. E-givenness is satisfied in this example, so the ellipsis is able to take place.

(35) JOHN will buy a book and MARY will ~~buy a book~~ TOO.

Merchant's (2001) analysis of VP-ellipsis ties together the idea that ellipsis is the non-pronouncing of syntactic structure with a theory of semantic identity. Semantic identity is captured by the idea of e-givenness, with e-givenness being imposed by the syntactic feature, [E]. [E] instructs PF not to pronounce syntactic structure, which captures the mechanics of how something is elided by suggesting that the grammar produces fully articulated syntactic structures but with some of that structure not being pronounced by the PF component.

3.1.6 Summary

To conclude this section, the evidence in favour of ellipsis sites containing syntactic structure discussed in 3.1.2 is quite compelling. The evidence from movement out of an elided constituent is particularly convincing, as it is hard to imagine in the Minimalist framework how the elements such as *wh*-phrases or derived subjects in passives would be merged into the syntax if they had not originated within the ellipsis site. As noted by van Craenenbroeck and Merchant (2013, 714) the question of whether it is the syntax or the semantics which is responsible for handling identity is still very much an open one. This question will be picked up again in the chapter on sluicing (4).

3.2 Verb-stranding VP-ellipsis

3.2.1 Introduction

In this section, I discuss verb-stranding VP-ellipsis, a type of VP-ellipsis which is found in many languages which display verb movement (i.e. V-to-T movement or more precisely, head movement of the verb into the inflectional domain). I begin by discussing the defence of verb-stranding VP-ellipsis as a type of VP-ellipsis in section 3.2.2. Section 3.2.3 continues in this vein as a discussion of the difficulty of disambiguating verb-stranding VP-ellipsis from null argument constructions. Section 3.2.4 briefly covers the verbal identity requirement, an especially strict identity requirement which applies to verb-stranding VP-ellipsis and also contains a brief but important note on the cross-linguistic availability of VP-ellipsis.

According to Goldberg (2005, 21¹⁶), due to the cross-linguistic rarity of the English type auxiliary system, VP-ellipsis was thought to exist only in English. However, she presents examples from other languages which she claims represent a type of VP-ellipsis construction. These non-English examples differ from English in that it is the main verb which appears immediately to the right of the ellipsis site, instead of an auxiliary, with all tense and aspect marking (which would have appeared on the auxiliary in English (Goldberg, 2005, 21)) appearing on the main verb itself. Goldberg (2005) refers to this type of VP-ellipsis as verb-stranding VP-ellipsis as the verb remains behind while the rest of the VP is elided, as seen in (36) taken from Ngonyani (1996a, 76).

¹⁶ There appear to be two versions of Goldberg (2005), and there is a slight difference between their page numbers. Page numbers here refer to this online version: <http://www.lotusgoldberg.net/dissertation/Goldberg-PHD-1st-half.pdf> (Accessed on 3 July 2014.)

- (36) Wa-geni wa-li-wek-a zawadi meza-ni na Swahili
 2-guest SM2-PST-put-FV 10.gift table-LOC and
 baba a-li-wek-a.
 father SM1-PST-put-FV
 ‘The guests put the gifts on the table and father did too’

Goldberg (2005, 4) notes that research on verb-stranding VP-ellipsis emerged in the 1990’s, and is therefore a much more recent addition to the literature on VP-ellipsis. Goldberg (2005, 19) cites Doron (1990) and McCloskey (1991), among others, as the first¹⁷ to suggest that languages where the verb raises to the inflectional domain can also have VP-ellipsis. At the time of her writing, Goldberg (2005, 4) claims that there are reports in the literature of verb-stranding VP-ellipsis occurring in several different languages. She lists these as Irish, Hebrew, Swahili, Ndendeule, Japanese, Korean, Brazilian Portuguese, European Portuguese, Serbo-Croatian, Russian, Finnish, Hungarian, Basque, Mandarin Chinese, and Tagalog (Goldberg, 2005, 18). It is important to note that Goldberg’s (2005) own work shows that some of these languages in fact do not exhibit verb-stranding VP-ellipsis. In their discussion of verb-stranding VP-ellipsis, van Craenenbroeck and Merchant (2013, 704) actually provide a much shorter list than this, which includes only Irish, Hebrew, Portuguese, Galician, Russian, Swahili and Ndendeule.

3.2.2 Verb-stranding VP-ellipsis is VP-ellipsis

It does of course seem odd to claim that a construction such as the one in (36) is a type of VP-ellipsis construction when the verb itself has not been elided, and so a key point in the literature has been to defend this claim. This defence takes the form of an attempt to show that verb-stranding VP-ellipsis exhibits the same key traits as English-style VP-ellipsis. The availability of sloppy identity readings, and the ability of the ellipsis site to appear within an embedded clause or within an island are the traits which appear

¹⁷ Though Goldberg (2005, 19) mentions that Huang (1987) and Chao (1987) may have suggested the existence of verb-stranding VP-ellipsis even before this.

consistently in the literature on verb-stranding VP-ellipsis (see for example Ngonyani (1996a 82), Goldberg (2005, 34) and Gribanova (2013, 105)).

To illustrate the argument from sloppy versus strict identity, I turn to data from Ngonyani (1996a, 84). Ngonyani follows McCloskey (1991) in assuming that the availability of both a strict and a sloppy reading is a basic trait of VP-ellipsis. In the following example from Johnson (2008a, 4), we see that the elided pronoun in the second conjunct has two potential readings.

(37) George likes his shoes and Sam does ~~like his shoes~~ too.

One of the two potential readings is referred to as the ‘strict’ reading, while the other is the ‘sloppy’ reading. The availability of the two readings becomes possible when a pronoun is elided, and there is an identical pronoun in the antecedent clause. The elided pronoun can have the same referent as the pronoun in the antecedent, or it can have its own referent (Johnson, 2008a, 4). In (37) the elided *his* in the second conjunct can have a strict reading where it refers to Sam and it can have a sloppy reading, where it can refer to George. Ngonyani (1996a, 84) presents the following example from the Bantu language Ndendeule which also allows for both sloppy and strict interpretations.

(38) Halima a-ki-lem-a n-ghonda w-ake Ndendeule
 Halima SM1-PST-cultivate-FV 3-farm 3-her
 na Miche a-ki-lem-a helahe.
 and Miche SM1-PST-cultivate-FV too
 ‘Halima cultivated her farm and Miche did too.’

In this example, the second conjunct could mean that Miche cultivated Halima’s farm (the sloppy reading) or that Miche cultivated her own farm (the strict reading) (Ngonyani, 1996a, 85). Because strict and sloppy readings are available in VP-ellipsis,

their availability in examples like (38) is taken as evidence that this is a type of VP-ellipsis (Ngonyani, 1996a, 85).

The next trait which is commonly treated as a specific characteristic of VP-ellipsis is the ability of the ellipsis site to be contained within an embedded clause. This is shown in (39). Gribanova (2013, 105) shows that this trait holds for Russian verb-stranding VP-ellipsis as well, as demonstrated in (40).

(39) Yesterday I didn't introduce Masha to Sasha, but I think that tomorrow, I will.

(40) Včera ja ne poznamomila Mašu s Sašej no Russian
 yesterday I NEG introduced.SG.F Maša.ACC with Saša.INSTR but
 dumaju čto Zavtra Poznamomlju.
 think.1st.SG that tomorrow introduce.FUT.1st.SG
 'Yesterday I didn't introduce Masha to Sasha, but I think that tomorrow, I will.'

In addition to being able to appear within an embedded clause, VP-ellipsis is also known to be able to appear within certain syntactic islands¹⁸. In the English example in (41), the ellipsis site is contained within the adjunct island formed by the phrase *after she did ~~put the jam on the table~~*. In (42), Gribanova (2013, 106) shows that this once again holds for verb-stranding VP-ellipsis in Russian.

(41) Q: Did Sadie put the jam on the table?

A: Yes, and she left after she did ~~put the jam on the table~~.

¹⁸ Note that this is a different issue to the one discussed in 3.1.2. That section dealt with the fact that extraction out of syntactic islands was ungrammatical even if the island is an ellipsis site, the discussion here pertains to the fact that the ellipsis site can appear with an (adjunct clause) island while its antecedent lies outside the island.

- (42) Včera ja ne poznamila Mašu s Russian
 yesterday I NEG introduced.SG.F Maša.ACC with
 Sašej i poka ne poznajlju ne uedu.
 Saša.INSTR and until NEG introduce.1st.SG.FUT NEG leave.1st.SG.FUT
 ‘I didn’t introduce Masha to Sasha yesterday, and I won’t leave until I do.’

Goldberg (2005, 22) notes that recognising verb-stranding VP-ellipsis as a type of VP-ellipsis shows that VP-ellipsis, like sluicing, gapping and stripping, is found in many languages. Before verb-stranding VP-ellipsis was recognised, VP-ellipsis, which appears so readily in English, was considered to be absent from other languages (Goldberg, 2005, 22). Goldberg (2005, 35) highlights the fact that the apparently fundamental traits of VP-ellipsis discussed above are based on VP-ellipsis as it is found in English. As more data from other languages becomes available, it may become necessary to revise what is considered characteristic of VP-ellipsis, as some of these traits may turn out to be specific to English (Goldberg, 2005, 35).

3.2.3 Verb-stranding VP-ellipsis Versus Null Objects

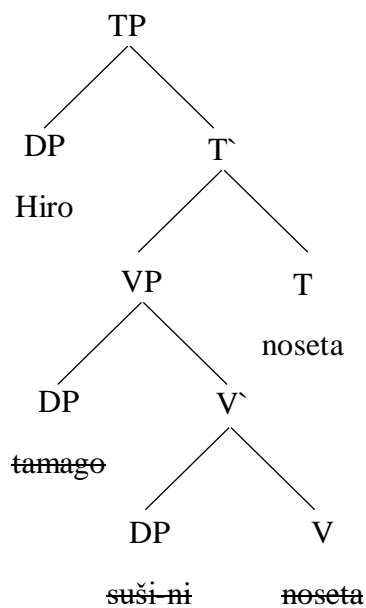
While they clearly share some key traits with English VP-ellipsis, one could object that the purported (verb-stranding) VP-ellipsis constructions just discussed may not be VP-ellipsis at all. This is because, as Gribanova (2013, 105) puts it, it is not easy to show that the traits associated with ellipsis are not also associated with null object constructions. Null object constructions, also variously referred to as null argument, object drop or argument drop constructions, are constructions where one or more of the arguments of the verb (usually the objects) have been replaced by a silent pronoun (*pro*) (see Rizzi (1986) for a discussion of ‘small’ *pro* and null objects). Null argument constructions and verb-stranding VP-ellipsis constructions appear indistinguishable on the surface, as in both cases there is a verb which is not followed by any overt material.

The following example, (43) (Goldberg, 2005, 81), shows a Japanese construction which looks just like the verb-stranding VP examples from Ndendeule etc., with the

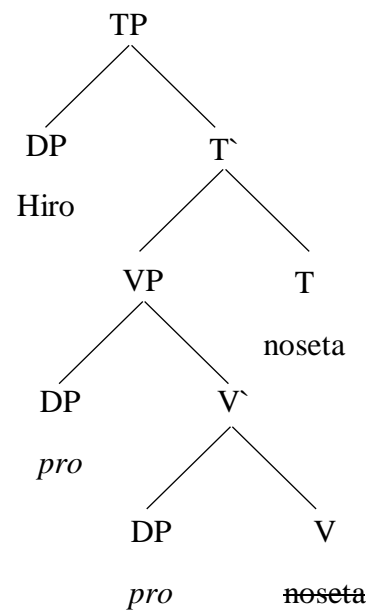
verb *noſeta* seemingly stranded and with its arguments *tamago* and *suſini* apparently having been elided. However, as the tree diagrams (44) and (45) from Goldberg (2005, 81) show, there are in fact two possible derivations which could produce (43).

- (43) Q: Tamago-o suſi-ni no-se-ta no? Japanese
 egg-ACC sushi-DAT ride-CAUS-PST Q
 ‘(Did) (you) put (lit. ‘cause to ride’) egg in the sushi?’
 A: Hiro-ga no-se-ta.
 Hiro-NOM ride-CAUSE-PST
 ‘Hiro put.’

(44)



(45)



While Goldberg (2005, 8) claims that Hebrew, Ndendeule, Swahili and Irish display verb-stranding VP-ellipsis, she notes that these languages also allow for null objects. In order to show that the structures which she claims are examples of verb-stranding VP-ellipsis are indeed that, and not simply null object constructions, Goldberg (2005) comes up with several control strategies. The basis of these strategies is to determine when the object of a verb may licitly be null and when it may not (Goldberg, 2005, 38). If it is possible to show that a particular object can be missing when a null object

construction is illicit, then it is likely that it has gone missing via ellipsis, according to Goldberg (2005, 8). For Hebrew, Goldberg (2005, 52) shows that there are two contexts pertaining to double object constructions in which null objects are not licit. The first is that an (inanimate) direct object can be null ((46) (Goldberg, 2005, 52)), independently of the indirect object (in this case a benefactive PP), but an indirect object cannot (by itself) be null, as shown in (47) (Goldberg, 2005, 52). (48), shows that both objects may be missing together (Goldberg, 2005, 54). Goldberg (2005, 53) takes this as an indication that the entire VP has been elided in (48) as (47) shows that the indirect object may not be a null object.¹⁹

- (46) Dani'el Šalax me'ilim la-yeladim, ve-Šira Hebrew
 Daniel send.PST.3rd.M.SG coats to.the-children and-Shira
 natna la-mevugarim.
 give.PST.3rd.F.SG to.the-adults
 'Daniel sent coats to the children, and Shira gave (coats) to the adults.'

- (47) Kaniti matana bišvil Miryam, ve-Natan Hebrew
 buy.PST.1st.SG present for Miryam and-Natan
 asaf peraxim.
 gather.PST.3rd.M.SG flowers
 'I bought a present for Miryam, and Natan gathered flowers /*gathered flowers (for Miryam).'

¹⁹ An alternative analysis that Goldberg (2005) does not seem to consider is that it could be possible for the indirect object to be null only when the direct object is null too.

- (48) Q: Šalaxt etmol et ha-yeladim le-beit-ha-sefer? Hebrew
 send.PST.2nd.F.SG yesterday ACC the-children to-house-the-book
 ‘Did you send the children to school yesterday?’
 A: Šalaxti.
 Send.PST.1st.SG
 ‘I sent.’

The second control is that the direct object cannot be null if it is an animate object (Goldberg, 2005, 53), as shown in (49) (the block capitals in this example indicate focus). However, just as with the previous example, an animate direct object can be absent if both it and the indirect object are absent together (Goldberg, 2005, 55) (50). Once again, this suggests that the entire VP has been elided and that Hebrew does indeed have VP-ellipsis as well as null object constructions.

- (49) Q: (Ha-'im) Miryam hisi'a Et Dvora Hebrew
 Q Miryam drive.PST.3rd.F.SG ACC Dvora
 la-makolet?
 to.the-grocery.store
 ‘(Did) Miryam drive Dvora to the grocery store?’
 A: *Lo, 'aval hi hisi'a la-DO'AR.
 no but she drive.PST.3rd.F.SG to.the-POST.OFFICE
 Intended: ‘No, but she drove (her) to the post office.’
- (50) Q: (Ha-'im) Miryam hisi'a Et Dvora Hebrew
 Q Miryam drive.PST.3rd.F.SG ACC Dvora
 la-makolet?
 to.the-grocery.store
 ‘(Did) Miryam drive Dvora to the grocery store?’
 A: Ken hi hisi'a.
 yes she drive.PST.3rd.F.SG
 ‘Yes, she did.’

Ngonyani and Githinji (2006, 32) at one point state that the verb can only agree with the direct object in asymmetric languages, but this appears to be an error, as they later present a table that shows that it is the indirect object that can be marked on the verb in Swahili and other asymmetric languages (Ngonyani and Githinji (2006, 39)). It seems then that Goldberg (2005) is mistaken, and that it is the indirect object that can be dropped, provided that there is object marking (agreeing with the indirect object) on the verb. What Goldberg's (2005) transitive Swahili examples in fact show, is that in transitives, dropping the direct object still triggers object marking (agreeing with that object) on the verb (compare (52)a and (52)b) (Goldberg, 2005, 56). This means that object marking is always required for object drop in Swahili. However, as with Hebrew, in Swahili both the direct object and the indirect object can be missing if they are missing simultaneously, which is shown in (52)c. Most notably, in this construction, the verb lacks any object marking, suggesting that ellipsis is responsible for removing the two objects (Goldberg, 2005, 57). Goldberg takes the Swahili examples in (52) from Ngonyani (1996b).

- (52)a. Kamau a-li-m-beb-a. Swahili
 Kamau SM1-PST-OM1-carry-FV
 'Kamau carried him'
- b. *Kamau a-li-beb-a. Swahili
 Kamau SM1-PST-carry-FV
 'Kamau carried'
- c. Juma a-li-be-ba m-toto na Kamau a-li-be-ba Swahili
 Juma SM1-PST-carry-FV 1-child and Kamau SM1-PST-carry-FV
 pia.
 too
 'Juma carried a child and Kamau did too.'

In languages which allow for null objects when an object marker is prefixed to the verb, there is another very straightforward way to test if verb-stranding VP-ellipsis is also possible. This is to see if other types of constituents, which cannot be marked on the verb, can be elided (Manus and Patin, to appear, 15). Manus and Patin (to appear, 16) show that in Swahili and Shingazidja (another Bantu language), it is possible to elide the infinitive or relative complement of the verb as shown in their examples, repeated here as (53) and (54).

- (53) M-kurugenzi a-li-taka ku-tembelea ki-wanda ch-ote Swahili
 1-director SM1-PST-want INF-visit 7-factory 7-all
 na wa-kuu wa idara wa-li-taka.
 and 2-boss of 9.department SM2-PST-want
 ‘The director wanted to visit the entire factory and heads of department did too.’

- (54) Ye=modirú ha-ka-handza yá-zuru le=firika Shingazidja
 AUG=1.director SM1-PST-want REL.SM1-visit AUG=5.factory
 piá n’=e=đámana w-a=hé m-bawa ha-ka-handzá.
 all and=1.boss 1-of=1.POSS 9-branch SM1-PST-want
 ‘The director wanted to visit the whole factory and the head of department did too.’

Unlike in Hebrew and Swahili etc., there are no restrictions on what type of arguments can drop in Japanese and Korean (Goldberg, 2005, 80). Goldberg’s (2005, 80) control strategies, involving certain types of VP-internal arguments which can only disappear under VP-ellipsis and not as independent null objects, can therefore not be applied here. This means that while it was possible to rule out a null object construction as the source of examples like (48) and (52), null object constructions in Japanese and Korean would be indistinguishable from verb-stranding VP-ellipsis constructions (on the surface at least) (Goldberg, 2005, 80).

As with the languages discussed above, an apparent parallelism between the availability of sloppy identity readings in English VP-ellipsis, and Japanese and Korean verb-

stranding VP-ellipsis-like constructions, has been taken as evidence in support of Japanese and Korean having verb-stranding VP-ellipsis (Goldberg, 2005, 86). As shown in the following examples, with the correct discourse salience conditions, Japanese and Korean allow various elements to be null independently of one another (Goldberg, 2005, 76). (55) from Goldberg (2005, 85) shows an example where both strict and sloppy readings are available, just like the examples discussed in section 2. Specifically, the second sentence of (55) may mean that Mary threw out her own (the strict reading) letters or that she threw out John's letters (the sloppy reading) (Goldberg, 2005, 85).

- | | | | | | |
|------|-------------------------------|-------------|------------|-------------|----------|
| (55) | John-wa | zibun-no | tegami-o | sute-ta. | Japanese |
| | John-TOP | self-o | letter-ACC | discard-PST | |
| | ‘John threw out his letters.’ | | | | |
| | Mary-mo | sute-ta. | | | |
| | Mary-also | discard-PST | | | |
| | ‘Mary also did.’ | | | | |

According to Goldberg (2005, 77), the fact that Japanese and Korean allow for sloppy readings in the same environments as English is presented by Otani and Whitman (1991) (who in turn cite Huang (1988, i.a.)) as a key argument in favour of the view that these languages have verb-stranding VP-ellipsis. However, this argument runs into serious problems when examined more closely. Goldberg (2005, 94) shows that in fact Japanese and Korean sometimes have sloppy identity readings when English does not and sometimes lack these readings when they are available in English. In (56), from Goldberg (2005, 96), no sloppy reading is available, though in the English VP-ellipsis equivalent (57), the sloppy reading is available.

- | | | | | |
|------|---|----------------|--------------|----------|
| (56) | John-wa | zibun(zisin)-o | nagusame-ta. | Japanese |
| | John-TOP | self-ACC | console-PST | |
| | ‘John consoled himself.’ | | | |
| | Bill-mo | <i>ec</i> | nagusame-ta. | |
| | Bill-also | EC | console-PST | |
| | ‘Bill _i also consoled *(himself _i)/ (John _j).’ | | | |

(57) John_i consoled himself and Bill_j did ~~console him_i/himself_j~~ too.

In (58) (Goldberg (2005, 102), originally appearing in Hoji (1998)), we see that even though there is no expression that could receive a variable interpretation (the expression in the antecedent clause is the proper name, *John-*, and not a pronoun), the second sentence of this example only receives a sloppy reading.

(58)	John-ga	John-o	suisens-ita.	Bill-mo	suisens-ita.	Japanese
	John-NOM	John-ACC	recommend-PST	Bill-also	recommend-PST	
	'John recommended John. Bill also recommended (Bill)/*did.'					

In fact, the claim that Japanese and Korean allow for sloppy identity readings in the same environments as English (i.e. in VP-ellipsis constructions) runs into an even more fundamental problem. This problem, as highlighted by Goldberg (2005, 106), is that sloppy readings are sometimes available for null elements in structures which cannot be (verb-stranding) VP-ellipsis. The construction in (59) from Goldberg (2005, 107) cannot be verb-stranding VP-ellipsis as the ellipsis site does not match its only possible antecedent. According to Goldberg (2005, 107), this is because the verbs in this example take different kinds of arguments, with *ha-* taking only a comitative argument (Goldberg, 2005, 107) and *ttayli-* taking only an argument in the accusative case²⁰. Nonetheless, a sloppy reading is available for (59) and is preferred to the strict reading (Goldberg, 2005, 107).

²⁰ While case mismatches between arguments are usually not a problem in VP-ellipsis, Goldberg (2005, 107) references Otani and Whitmann (1991) as having stated that this type of case mismatch should not be possible in Japanese verb-stranding VP-ellipsis.

- (59) John-un caki-uy kay-wa kotcal sanpo-lul Korean
 John-TOP self-GEN dog-COMIT often walk-ACC
 ha-na-ta.
 take-PRE-IND
 ‘John often takes a walk with his dog.’
 Kulena Bill-un kotcal ttayli-n-ta.
 but Bill-TOP often beat-PRE-IND
 ‘But Bill often beats (his dog).’

One of the main claims against Japanese and Korean having verb-stranding VP-ellipsis is that these languages do not seem to be able to elide manner adverbs which are adjoined to the VP (Goldberg, 2005, 89). Goldberg (2005, 89) credits Park (1997) as the first to bring this evidence to bear on the discussion of ellipsis in Korean, and Oku (1998) as the first to discuss this for Japanese. As Goldberg’s (2005, 90) example (60) shows, manner adverbs in English, when present in the antecedent clause, are understood to be in the ellipsis site too. The second sentence of (60) clearly means that Heather chopped up the garlic carefully, and not that she simply chopped it or that she chopped it in some unspecified manner. But this is not the case for the Korean example in (61) (originally from Park (1997)), where the clause containing the ellipsis site simply means that Mary (also) runs, but not that she also runs fast (Goldberg, 2005, 91).

- (60) Alan had chopped up the garlic carefully. Heather had ~~chopped up the garlic carefully~~ as well.

- (61) John-i ppali tali-ko Mary-to tali-nta. Korean
 John-NOM fast run-CONJ Mary-also run-DECL
 ‘John runs fast and Mary *does/ runs too.’

In English, when dealing with a negated ellipsis site which contains a manner adverb, such as in (62) (Goldberg, 2005, 90), the elided clause is understood to mean that the action took place, but not in the manner specified by the manner adverb (and does not

mean that the action did not occur at all). However, the example in (63) (originally from Oku (1998)) indicates that this is not the case in Japanese, as here the sentence is interpreted as though there was no elided adverb and instead, the entire VP falls under the scope of negation (Goldberg, 2005, 90).

(62) Bill washed the car carefully, but John didn't ~~wash the car carefully~~.

(63)	Bill-wa	kuruma-o	teineini	arat-ta.	Japanese
	Bill-TOP	car-ACC	carefully	wash-PST	
	John-wa	arawa-nakat-ta.			
	John-TOP	wash-not-PST			

‘Bill washed the car carefully. John didn't wash the car /*wash the car carefully.’

Alongside the fact that manner adverbials in Japanese and Korean cannot be independently null, the fact that they still cannot be recovered when the rest of the VP is missing is evidence that these languages do not have verb-stranding VP-ellipsis (Goldberg, 2005, 91). However, Goldberg (2005, 92) also notes that because manner adverbs are VP adjuncts and not internal arguments of the verb, the inability to elide manner adverbs is not a conclusive argument against Japanese and Korean having VP-ellipsis.

Finally, Goldberg (2005, 82) notes that it is not clear that the main verb in Japanese and Korean actually does raise to the inflectional domain as both languages are head-final and allow scrambling. This makes it difficult to tell if the verb has moved as such movement would be string-vacuous. However, if the verb does not move to the inflectional domain (and thus the ellipsis site is not governed by a head in the inflectional domain), then one of the most basic characteristics of VP-ellipsis would be missing in the proposed verb-stranding VP-ellipsis constructions of Japanese and Korean.

Mandarin Chinese is another language where there are arguments both for and against the language having verb-stranding VP-ellipsis. Goldberg (2005, 86) notes that similarities between the availability of sloppy readings in Japanese and Korean were likened to sloppy readings in apparent Mandarin verb-stranding VP-ellipsis constructions (in addition to the similarities to English already mentioned previously in this section). Ma (2017, 2) cites Huang (1988) as one of the first to argue in favour of Mandarin having verb-stranding VP-ellipsis but Ma (2017) and others have argued against Mandarin having verb-stranding VP-ellipsis. Ma (2017, 80) shows that, as with Japanese and Korean, seemingly elided adverbs are not recoverable under the construction which has been claimed to be Mandarin verb-stranding VP-ellipsis. This is shown in her example in (64), where the adverb phrase *liang ci* is not recovered (Ma, 2017, 80).

- (64) John ma le na ge ren liang ci, Mandarin
 John scold PFV DEM CL person two CL
 Peter ye ma le ~~na~~ ~~ge~~ ~~ren~~ ~~liang~~ ei.
 Peter also scold PFV DEM CL person two CL
 Intended: ‘John scolded that person twice and Peter also scolded that person twice.’

The intended reading for this example, that Peter also scolded that person twice, is not available. Other VP internal elements which should be recoverable after being elided but cannot be include certain DP objects. In (65) from Ma (2017, 61), the numeral-classifier phrase *san ben shu* is not recoverable. As with the previous example, the sentence is grammatical but does not express the intended meaning. Instead of being interpreted as Mary bought three books, it only means that Mary bought, without specifying what.

- (65) John mai le san ben shu, Mary ye mai Mandarin
 John buy PFV three CL book Mary also buy
 le ~~san~~ ~~ben~~ ~~shu~~.
 PFV three CL book

Intended: 'John bought three books and Mary did too.'

Goldberg's (2005, 73) series of diagnostics reinforces the idea that Hebrew, Irish, Swahili and Ndendeule do indeed display a type of VP-ellipsis. However, for Japanese and Korean, the diagnostics suggest that these languages do not display verb-stranding VP-ellipsis. Instead, the approach which postulates a series of independently dropped elements (which did not work for Hebrew, Irish, Swahili and Ndendeule) appears to be the right one for Japanese and Korean (Goldberg, 2005, 119). The work by Goldberg (2005, 119) discussed in this section has also highlighted the fact (reiterated by Gribanova (2013, 105)), that the availability of sloppy identity is not a reliable diagnostic for verb-stranding VP-ellipsis, as sloppy identity-like readings can occur in constructions which do not involve ellipsis. Ma's (2017) work shows that Mandarin Chinese can be counted with Japanese and Korean as a language which does not have verb-stranding VP-ellipsis.

3.2.4 Other Notes on Verb-stranding VP-ellipsis

While one of Goldberg's (2005) issues with the Japanese and Korean data is that they may not actually involve V-to-I raising, van Craenenbroeck and Merchant (2013, 717) note that not all languages with V-to-I raising display verb-stranding VP-ellipsis. As their example in (66) shows, Dutch, a V2 language where the verb moves out of the VP and into the inflectional domain, does not have verb-stranding VP-ellipsis (van Craenenbroeck and Merchant, 2013, 717).

- (66) *Jan eet appels en ik eet ook. Dutch
 John eats apples and I eat also

Intended: 'John is eating apples and I am too.'

In (66)²¹, the moved verb, *eet*, is not able to license (verb-stranding) VP-ellipsis though in other languages, we have seen that it is. For van Craenenbroeck and Merchant (2013, 717), this is evidence that the head that licenses VP-ellipsis is subject to cross-linguistic variation.

No discussion of verb-stranding VP-ellipsis would be complete without mention of the verbal identity requirement. In the English example (67), we see that the inflectional head which governs the ellipsis site does not need to match the corresponding inflectional head in the antecedent clause (*couldn't* versus *will* in this case). However, as we see in (68) taken from Gribanova (2013, 118) this sort of mismatch is not tolerated in verb-stranding VP-ellipsis constructions (where the mismatch between *uronil* and *podnjal*, is the source of the awkwardness of this example).

(67) John couldn't go out for coffee last week, but this week he will ~~go out for coffee~~.

(68)	#Kto-to	uronil	ètu	vazu.			Russian	
	someone	dropped.SG.M	this.ACC	vase.ACC				
	'Someone dropped this vase.'							
	Tot	fakt,	čto	nikto	ne	podnjal	eë	menja
	the	fact	that	no-one	NEG	under-hold.SG.M	it.ACC	me.ACC
	očen'	ogorčæet.						
	very	upsets.3 rd .SG						
	Intended: 'The fact that no one picked (it) up upsets me.'							

Goldberg (2005, 157) is credited with being the first to observe this special identity requirement for verbs in verb-stranding VP-ellipsis, which she referred to as the 'verbal identity requirement'. The verbal identity requirement, as stated in van Craenenbroeck and Merchant (2013, 705), is that the antecedent and target clause main verbs must be

²¹ Van Craenenbroeck and Merchant (2013, 717) mark this example as ungrammatical. However, a native German speaker has pointed out to me that the German equivalent of this sentence would be acceptable. Therefore, it is not clear whether this example is indeed ungrammatical, or whether it simply does not convey the intended ellipsis reading.

identical in their root and derivational morphology. The verbal identity requirement applies only to verb-stranding VP-ellipsis and has no correlate in English-style VP-ellipsis. One possible explanation for this special identity requirement is offered by Gribanova (2013, 120). According to her, if one follows Chomsky (2000) in assuming that head movement is post-syntactic, then the verb is within the ellipsis site when the usual identity relation is established. The verbal identity requirement would then fall out naturally from standard assumptions about semantic identity in VP-ellipsis, discussed in section 3.1.3. Gribanova (2013, 117) notes that the inflectional morphology of tense, aspect and modality does not enter into this special identity requirement.

3.2.5 Conclusion

In the preceding sections I have looked at verb-stranding VP-ellipsis. The examples discussed here show that VP-ellipsis does indeed occur outside of English. While verb-stranding VP-ellipsis clearly shares some traits with English-style VP-ellipsis, these traits are not enough to distinguish verb-stranding VP-ellipsis from null argument constructions. In order to tease these two potentially ambiguous constructions apart, a large part of the literature is given over to determining language-specific diagnostic techniques. For several of the languages mentioned in this section, these diagnostics reaffirmed that the languages in question do have verb-stranding VP-ellipsis, but we also saw that for Japanese and Korean, these diagnostics suggest that these two languages do not have verb-stranding VP-ellipsis and instead, only have null argument constructions. Mandarin also does not seem to have verb-stranding VP-ellipsis. At the end of this section, I have added a basic discussion of the verbal identity requirement, which is a special, and an unexpected, trait of verb-stranding VP-ellipsis constructions. I end off with the important note that even though VP-ellipsis is found outside of English, it is not found in all languages with verb movement, with Dutch as an example of a language which displays verb raising but not verb-stranding VP-ellipsis. The data from languages other than English which has been presented in this section also serves to lead into the following section, which will focus on VP-ellipsis in the Bantu language isiXhosa.

3.3 Ellipsis in isiXhosa

3.3.1 Introduction to Ellipsis in isiXhosa

This section examines the work done by Xiujii Ma on isiXhosa from her PhD thesis. IsiZulu and isiXhosa are both languages from the Nguni cluster of the Southern Bantu language family and they have a high degree of mutual intelligibility. This section has been included as Ma's (2017) work with regard to ellipsis constructions is highly relevant to my own work on isiZulu. Section 3.3.2 deals with Ma's findings with regard to the absence of VP-ellipsis and verb-stranding VP-ellipsis in isiXhosa. Section 3.3.3 examines the types of ellipsis which Ma does find to be attested in isiXhosa and includes a summary of the novel mechanism which Ma proposes in order to account for these ellipsis constructions.

3.3.2 Ma's (2017) Findings on VP-ellipsis in isiXhosa

Ma (2017, 191) claims that the vP^{22} itself cannot be elided but that certain elements from inside the vP can be. She shows that object marked DPs, NPs from within the object DP and CP and infinitival complements of the verb can be elided.

With regard to modal verbs, Ma (2017, 204) notes that isiXhosa lacks the type of modal verbs that are potentially able to license VP-ellipsis in Mandarin and English. isiXhosa also has so-called 'deficient' verbs, which are similar to modals, but deficient verbs are not able to license VP-ellipsis in isiXhosa either. One would therefore not expect to find the traditional version of VP-ellipsis in isiXhosa. The following examples from Ma (2017, 205) show that the deficient verb *soloko*²³ cannot license VP-ellipsis in isiXhosa,

²² As mentioned in 3.1.5, different analyses point to slightly different sizes of the ellipsis site in VP-ellipsis. Van Craenenbroeck's (2017) fine-grained approach, discussed in 3.1.4 shows that the ellipsis site contains more than just the light verb phrase. However, in this case, Ma (2017) seems to be working under the assumption that in VP-ellipsis, it is the vP that is elided.

²³ Some deficient verbs express meanings that are unusual in that the meanings are adverbial. For example, English adverbs such as *almost* or *always* can be expressed using deficient verbs, while other deficient verbs are able to convey things like negation.

with (69)a showing the grammatical unelided version of the sentence and (69)b showing that the traditional style of VP-ellipsis from English is ungrammatical.

(69)a. U-John u-soloko e-tyelela aba-zali ba-khe, isiXhosa
 1a-John SM1a- always PTCP.SM1-visit 2-parents 2-his
 naye u-Sipho u-soloko e-tyelela a-ba-zali ba-khe.
 and 1a-Sipho SM1a- always PTCP.SM1-visit 2-parents 2-his
 ‘John always visits his parents and Sipho always visits his parents too.’

b. *U-John u-soloko e-tyelela aba-zali ba-khe, isiXhosa
 1a-John SM1a- always PTCP.SM1-visit 2-parents 2-his
 naye u-Sipho u-soloko ~~e-tyelela~~ ~~a-ba-zali~~ ~~ba-khe~~.
 and 1a-Sipho SM1a- always PTCP.SM1-visit 2-parents 2-his
 Intended: ‘John always visits his parents and Sipho does too.’

Ma (2017) gives several reasons why she believes that verb-stranding VP-ellipsis is not available in isiXhosa. Here I will focus on just a few of these reasons, in particular the ones which relate to the characteristics of verb-stranding VP-ellipsis already discussed and which also relate to the isiZulu data in the following sections of this chapter. The first of these reasons which I will discuss is the inability to recover (supposedly) elided adverbs in isiXhosa (Ma, 2017, 174).

Ma (2017, 175) shows in the following example (70), that the manner adverb *kakuhle* cannot be recovered when it is dropped along with the object DP in the second conjunct.

- (70) U-John u-thetha isi-Xhosa kakuhle, naye isiXhosa
 1a-John SM1a-speak 6-Xhosa well and
 u-Mary u-ya-si-theta ~~kakuhle~~ ~~isi-Xhosa~~.
 1a-Mary SM1a-DIS-OM6-speak well 6-Xhosa
 Intended: ‘John speaks Xhosa well and Mary does too.’

In this example, the intended reading that Mary speaks Xhosa well is not available. Instead, this example can only mean that Mary simply speaks Xhosa, with no particular manner specified (Ma, 2017, 176). The elided DP *isi-Xhosa* is recoverable but only because of the presence of the object agreement marker *si-* on the verb (i.e. (70) means something like ‘John speaks Xhosa well and Mary speaks (it)’). As with the examples discussed in section 3.2, Ma (2017, 176) interprets the inability to recover adverbs as an indication that ellipsis has not taken place.

The next argument from Ma against isiXhosa having verb-stranding VP-ellipsis involves the head raising of the verb in isiXhosa. A standard assumption in the literature is that the verb undergoes V-to-T movement in order for it to be stranded outside of the ellipsis site in verb-stranding VP-ellipsis (Ma, 2017, 182). Citing work done on isiZulu (see for example Buell (2005)), Ma (2017, 182) argues that in isiXhosa, the verb never moves as high as T and that it actually never leaves the *vP* (Ma, 2017, 188), meaning that it never escapes the ellipsis site in the first place. Ma’s (2017, 183) argument against V-to-T movement in isiXhosa hinges on the order of morphemes which are affixed to the verb in isiXhosa. She notes that derivational morphemes (and the perfective marker) are suffixed to the verb while inflectional morphemes are prefixed onto the verb. Invoking Kayne’s LCA (1994) and Baker’s (1985) Mirror Principle, Ma (2017, 184) states that a moved head always lands at the left of the higher head that c-commands it. This means that the isiXhosa verb picks up suffixes by successive cyclic head movement. However, for the prefixes on the isiXhosa verb to appear as prefixes, the verb cannot move to a higher position than those occupied by the prefixes. As tense (with the exception of the perfective marker) and agreement marking appear as prefixes on the isiXhosa verb, this suggests that the verb does not move as high as T (Tense). If

the verb does not move into the Infl domain, then it is not in a position to license verb-stranding VP-ellipsis, if it has escaped the ellipsis site at all.

3.3.3 Other Types of Ellipsis in isiXhosa

While Ma (2017) finds that neither verb-stranding VP-ellipsis nor English-style VP-ellipsis exists in isiXhosa, she does find evidence of other types of ellipsis in the language. The first of these is that object DPs can be elided when the verb is marked for object agreement (Ma, 2017, 191). In (71)a from Ma (2017, 167), the verb in the second conjunct *-funda*, 'study', is prefixed with the noun class 10 object agreement marker *si-* but in b, the object agreement marker is absent and the sentence is ungrammatical.

- (71)a. U-John u-funda isi-Xhosa, naye u-Mary isiXhosa
 1a-John SM1a-study 6-Xhosa and 1a-Mary
 u-ya-si-funda ~~isi-Xhosa~~.
 SM1a-DIS-OM6-study 6-Xhosa
 'John studies Xhosa and Mary also studies (it).'
- b. *U-John u-funda isi-Xhosa, naye u-Mary isiXhosa
 1a-John SM1a-study 6-Xhosa and 1a-Mary
 u-ya-funda ~~isi-Xhosa~~.
 SM1a-DIS-study 6-Xhosa
 Intended: 'John studies Xhosa and Mary also studies (it).'

The second type of ellipsis which Ma (2017, 201) describes in isiXhosa is what she refers to as the ellipsis of the NP in the object DP (i.e. D's NP complement in the object DP). Ma (2017, 201) shows that the NP can be elided regardless of whether or not the verb is marked for object agreement. Her example (72)a shows that *iimoto* can be elided when there is no object marking on the verb. (72)b shows that this example is still

grammatical when the object agreement marker *zi-* is prefixed to the verb (Ma, 2017, 201).

- (72)a. U-John wa-thenga ii-moto ezi-ntathu, naye isiXhosa
 1a-John SM1a.PST-buy AUG.10-car ADJ10-three and
 u-Mary wa-thenga ~~ii-moto~~ ezi-ntathu.
 1a-Mary SM1a.PST-buy AUG.10-car ADJ10-three
 ‘John bought three cars and Mary also bought three.’
- b. U-John wa-thenga ii-moto ezi-ntathu, naye isiXhosa
 1a-John SM1a.PST-buy AUG.10-car ADJ10-three and
 u-Mary wa-zi-thenga ~~ii-moto~~ ezi-ntathu.
 1a-Mary SM1a.PST-OM10-buy AUG.10-car ADJ10-three
 ‘John bought three cars and Mary also bought three.’

I find Ma’s (2017, 201) analysis of these examples to be problematic. In (72), the noun *moto* is elided along with its augment, *i-* and this is the case in all of Ma’s (2017) examples for this type of ellipsis. The augment is usually analysed as a determiner or a case marker, i.e. a functional head in the extended projection of the noun (see for example Halpert (2012), Buell (2011) and Visser (2008) for discussion of isiXhosa DPs), so it would seem that more than just the NP is being elided here. Ma’s (2017) examples of this type of ellipsis all involve a complex DP, and in these examples at least some of the DP remains after ellipsis (in (a) and (b) the adjective *ezintathu* remains after *ii-moto* has been elided). These examples, then, seem to involve the ellipsis of something more than just the NP but at the same time are clearly different from examples where the whole DP is elided as in (71).

For the sake of simplicity, I consider Ma’s (2017) next two findings together. Ma (2017, 202) finds that the CP complement of the verb can be elided as well as the infinitival complements of the verb (Ma, 2017, 203). What these two types of ellipsis have in common is that in both cases, the verb must be in the disjoint form and no object

marking is required on the verb (Ma, 2017, 202). Her example in (73)a shows an example of CP complement ellipsis when the verb is in the disjoint form (Ma, 2017, 202). (73)b shows its ungrammatical conjoint counterpart.

(73)a. Ndi-y-azi ukuba u-John u-thanda u-Mary, naye isiXhosa
 1st.SG-DIS-know that 1a-John SM1a-love 1a-Mary and
 u-Sipho u-y-azi ~~ukuba u-John u-thanda u-Mary.~~
 1a-Sipho SM1a-DIS-know that 1a-John SM1a-love 1a-Mary
 ‘I know that John loves Mary and Sipho also does/knows (it).’

b. *Ndi-y-azi ukuba u-John u-thanda u-Mary, naye isiXhosa
 1st.SG-DIS-know that 1a-John SM1a-love 1a-Mary and
 u-Sipho w-azi ~~ukuba u-John u-thanda u-Mary.~~
 1a-Sipho SM1a-know that 1a-John SM1a-love 1a-Mary
 Intended: ‘I know that John loves Mary and Sipho also does/knows (it).’

Example (74)a from Ma (2017, 203) is an example of the ellipsis of the infinitival complement of the disjoint verb. (74)b from Ma (2017, 204) shows again that the verb cannot be in the conjoint form.

(74)a. U-John u-funa uku-funda i-ncwadi ka-Fred, naye isiXhosa
 1a-John SM1-want INF-read 9-book POSS.1a-Fred and
 u-Mary u-ya-funa ~~uku-funda i-ncwadi ka-Fred.~~
 1a-Mary SM1a-DIS-want INF-read 9-book POSS.1a-Fred
 ‘John wants to read Fred’s book and Mary also wants to.’

- b. *U-John u-funa uku-funda i-ncwadi ka-Fred, naye isiXhosa
 1a-John SM1-want INF-read 9-book POSS.1a-Fred and
 u-Mary u-funa ~~uku-funda~~ ~~i-ncwadi~~ ~~ka-Fred~~.
 1a-Mary SM1a-want INF-read 9-book POSS.1a-Fred
 Intended: ‘John wants to read Fred’s book and Mary also wants to.’

Halpert and Zeller (2015, 488) note that it is well established in the literature on isiZulu that the conjoint form of the verb is only licensed when the verb is followed by overt material in the *vP*. The disjoint form of the verb is licensed when the verb is the last overt element within the *vP*, for example, when the verb is intransitive or when any material following the verb has been moved out of the *vP* (Halpert and Zeller, 2015, 488). These facts should hold for isiXhosa as well (see Carstens and Mletshe (2015)). While the conjoint form is not visibly marked on the verb, the disjoint form is marked on the verb using the prefix *ya-* in the present tense and with the suffix *-ile* in the recent past tense (Halpert and Zeller, 2015, 488). The conjoint-disjoint alternation is not marked in other tenses, such as the remote past²⁴. Halpert and Zeller’s (2015, 488) (slightly modified) example in (75)a shows a run-of-the-mill transitive sentence in isiZulu where the verb is in the conjoint form. b shows that the conjoint form is not grammatical when there is nothing else in the *vP*. c shows that the verb must be in the disjoint form if nothing follows the verb within the *vP*.

- (75)a. U-John u-pheka i-qanda isiZulu
 1a-John SM1-cook 5-egg
 ‘John is cooking an egg.’
- b. *U-John u-pheka. isiZulu
 1a-John SM1-cook
 Intended: ‘John is cooking.’

²⁴ See also Voeltz 2004 for discussion on the distribution of the conjoint and disjoint forms.

- c. U-John u-ya-pheka.
 1a-John SM1-DIS-cook
 'John is cooking.'

The significance of the disjoint form in (73)a and (74)a is that the presence of the disjoint form suggests that all elements have been moved out of the VP. Ma (2017, 248) notes that elements which have originated inside the ν P can only be elided under the same conditions which regulate their movement out of the ν P. For example, object DPs can only be fronted (i.e. moved out of the ν P) when object marking occurs on the verb and object DPs can only be elided when object marking occurs on the verb (Ma, 2017, 249). CP and infinitival complements of the verb can only be fronted when the sentence is in the disjoint form and likewise, they can only be elided when the sentence is in the disjoint form (Ma, 2017, 250).

Ma (2017, 255) captures the parallels between movement and ellipsis by proposing that elided constituents must move out of the ν P and into the specifier of an ellipsis phrase, EP. The ellipsis phrase is a phrase at the left periphery of the ν P (Ma, 2017, 247). Any phrase that moves to the specifier of EP is syntactically frozen and is treated as being phonetically null (Ma, 2017, 247). The EP has what Ma (2017, 247) refers to as an ellipsis EPP feature. Any maximal projection within EP's c-command domain can move to the specifier of EP in order to satisfy the ellipsis EPP feature, subject to the normal restrictions on movement (Ma, 2017, 247). The idea of the ellipsis phrase is a novel suggestion for the mechanism of ellipsis which Ma (2017) has proposed. Forcing elements to move before they can be elided captures the similarities between ellipsis and movement which Ma highlights, as any elided element must first have moved (and been subjected to the requirements of movement in isiXhosa, such as triggering object marking) before being elided.

Ma (2017, 264) claims that the ν P itself is never elided in isiXhosa. As a maximal projection within the c-command domain of EP, the ν P should be able to move to [spec, EP] and so Ma (2017, 264) provides three reasons why this is not possible. Ma (2017, 264) first assumes that when FocP is present in the syntactic structure, it projects

between EP and T (Ma (2017, 265) argues that Foc is merged after the head of the ellipsis phrase is merged), and ν P is obliged to move to [spec, FocP] in order to check the strong [+focus] feature of Foc and so it cannot move to [spec, EP].

Her second key assumption deals with cases in which FocP is not part of the syntactic construction (Ma, 2017, 265). In such cases, the ν P does not move to [spec, FocP] and should be able to move to [spec, EP]. Ma (2017, 265) notes that elements which are not elided are focused and that the fact that ν P is not elided even when it is not focused, must mean that EP is only present in the syntactic structure when FocP is present as well. Therefore, when there is no focus phrase in the derivation, there is no ellipsis phrase either (Ma, 2017, 266). Finally, Ma (2017, 266) notes that while EP cannot be present without FocP, FocP can be present without EP.

3.4 VP-ellipsis in isiZulu

3.4.1 IsiZulu VP-ellipsis

In this section I discuss the first part of my own findings with regard to VP-ellipsis in isiZulu. The examples discussed in this section are similar to VP-ellipsis as it appears in English, at least on the surface. In other words, while the findings for other Bantu languages discussed in section 3.2 would lead us to expect that isiZulu would have verb-stranding VP-ellipsis and while Ma's (2017) assertion that isiXhosa does not have VP-ellipsis or verb-stranding VP-ellipsis would lead us to expect to find no version of VP-ellipsis in isiZulu, this section provides evidence that in some constructions, isiZulu has the type of VP-ellipsis where an auxiliary precedes the ellipsis site (rather than the raised verb).

Using English examples of VP-ellipsis like those discussed in section 3.1 as a starting point, I worked with isiZulu L1 informants to construct possible examples of VP-ellipsis in isiZulu. All the isiZulu examples discussed in this section were presented to six different isiZulu speakers.

While Ma (2017, 204) has claimed that deficient verbs cannot license ellipsis in isiXhosa, I have found that in isiZulu some deficient verbs can license VP-ellipsis. The deficient verbs, *cishe*, *zange* and *kaze* (meaning ‘almost’, ‘never’ and (also) ‘never’ respectively) each seem to be able to license VP-ellipsis, as the examples which follow will show. Doke (1973, 202) refers to *cishe* and other words with a similar function as ‘deficient verbs’. These deficient verbs are involved in the formation of compound tenses and are usually followed by a participle or a subjunctive (Doke, 1973, 202). Buell (2005, 51) refers to these words as raising verbs. Some deficient verbs are followed by an infinitive (Doke, 1973, 202) but in my examples I have avoided deficient verbs involving the infinitive form as I assume that any (potential) ellipsis of infinitives would definitely not be a form of VP-ellipsis (as this would involve eliding more structure than is possible in VP-ellipsis).

In my first isiZulu example in (76), we see that the deficient verb *zange*, meaning ‘never,’ is able to license VP-ellipsis and we see that everything following the word *zange* in the second conjunct has been elided.

(76)	A- <i>ngi-zange</i>	<i>ngi-ye</i>	<i>e-movi-ini</i>	isiZulu
	NEG-1 st .SG-never	SM1 st .SG-go.PST	LOC-movies-LOC	
	no-Sam	a-ka-zange	u-ye	e-movi-ini.
	and.1a-Sam	NEG-SM1a-never	SM1a-go.PST	LOC-movies-LOC
	‘I didn’t go to the movies and Sam didn’t.’			

In both conjuncts of (76), there is multiple agreement, with the subject agreeing with both *zange*²⁵ and the main verb *ye*. *Zange* also takes the negative prefix *a-* in both conjuncts. In the first conjunct of (76), *zange* agrees with the subject *pro* with the features [1st person] and [singular] and so *zange* displays the 1st person singular subject agreement marker *ngi-*. The negative prefix is then added, to produce *angizange*. In the second conjunct, *zange* agrees with the noun class 1a subject *Sam*. The noun class 1a

²⁵ All of my isiZulu examples of this type were constructed with the same auxiliary in both conjuncts. In English, it is possible for the auxiliaries in each conjunct to be different (or for there to be an auxiliary in just the elliptical conjunct), but I did not test for this in isiZulu.

subject agreement marker together with the negative prefix produces the prefix *aka-* which appears on *zange*.

Of the six informants, four judged the construction in (76) to be perfectly well formed. The elderly informant found the construction to be unacceptable and one younger speaker was uncertain about the construction. The speakers who found this construction acceptable confirmed that the meaning of the second conjunct was that Sam never went to the movies. As the main verb and the locative subject are absent in the second conjunct, I take this to be an ellipsis construction. Of the four isiZulu constructions discussed in this section, (76) has the highest number of favourable judgements.

(77) is also a very favourable construction, with three informants finding it perfectly well formed (including the elderly informant who did not like (76)), two finding it acceptable and one informant (the youngest informant) being uncertain about it. In (77), the auxiliary which licenses ellipsis is *cishe* which means ‘almost’ or ‘nearly’ and again, we see that everything following the word *cishe*, including the verb and its object, has been elided.

(77)	U-Sam	u-cishe		wa-wu-qeda		um-sebenzi		isiZulu
	1a-Sam	SM1a.SG-almost		SM1a-OM3-finished		3-work		
	wakhe	kanti	no-Sarah	naye	cishe	wa-wu-qeda		
	his	whereas	and-Sarah	also	almost	SM1a-OM3-finished		
	um-sebenzi	wakhe .						
	3-work	her						
	‘Sam almost finished his work however Sarah also did.’							

In the first conjunct of (77), *cishe* agrees with the third person, singular subject *Sam* and therefore takes the third person subject agreement marker *u-*. However, the *cishe* of the second conjunct does not have any subject agreement marker. Some of my informants claim that the subject agreement marker is optional on *cishe* in both conjuncts and one

informant claimed that it is only optional in the second conjunct. The reasons behind this optionality (as well as the extent to which it is found in other contexts) are unclear and fall outside the scope of this thesis, so I leave them open for future research. (78) is another example of an ellipsis construction where the word *cishe* licenses ellipsis.

(78)	??U-Mama	u-cishe	wa-wa	no-mfana	u-cishe	isiZulu
	1a-mother	SM1a-almost	SM1a-fell	and.1-boy	SM1a-almost	
	wa-wa	naye.				
	SM1-fell	also				
	‘The mother almost fell and the boy almost did too’					

However, the judgements for (78) were the most varied of any of the isiZulu constructions discussed in this section. Two of my informants (the youngest informant and one postgraduate student) found the construction to be completely unacceptable, one informant found the construction to be poorly formed, one informant was uncertain, one informant found the construction to be acceptable and one informant judged it to be perfectly well formed. It is unclear why the judgements of my informants varied so much more widely for this example. According to three of my informants, the slight differences between (77) and (78), namely that *cishe* in the second conjunct of (78) is marked for agreement with the subject and that the word *naye* appears after *cishe* in (78) but before it in (77), are optional variations which should have no bearing on the grammaticality of the construction. Nevertheless, there were two informants who found the construction acceptable and so I take this to be another example of VP-ellipsis in isiZulu, albeit one that is only acceptable to some speakers.

The final isiZulu VP-ellipsis construction which I discuss is shown in (79). In this example, the auxiliary *kaze*, which means ‘never’ or ‘didn’t’, licenses ellipsis.

(79)	U-Andrew	aka-kaze	a-khohlwe	uku-funda	isiZulu
	1a-Andrew	NEG.SM1a -never	NEG.SM1a-forgot	INF-study	
	no-Sam	aka-kaze	a-khohlwe	uku-funda	
	and.1a-Sam	NEG.SM1a-never	NEG.SM1a-forgot	INF-study	
	'Andrew didn't forget to study and Sam didn't.'				

The judgements for (79) are the most polarised of any in this section. Three of my informants found the construction to be perfectly well formed. Only the youngest informant was uncertain about it and the last two informants (including the oldest informant) found the construction to be completely unacceptable. *Kaze* bears the prefix *aka-* in both conjuncts, which is a combination of the subject agreement morpheme and the negative prefix.

3.4.2 IsiZulu verb-stranding VP-ellipsis

Although Ma (2017) argues that verb-stranding VP-ellipsis is not attested in isiXhosa, some of the original work on verb-stranding VP-ellipsis is based on examples from the Bantu languages Swahili and Ndendeule. In light of this cross-Bantu variation, therefore, it may still be possible to find verb-stranding VP-ellipsis in isiZulu as well, even though isiZulu and isiXhosa are closely related and mutually intelligible (see above). However, this section aims to show that the picture is far less clear in isiZulu, as first language speakers reject all but a handful of the potential verb-stranding VP-ellipsis examples.

Goldberg's (2005) Swahili examples discussed in section 3.2 give us a good idea of what verb-standing VP-ellipsis might look like in isiZulu. In her examples, such as (80) (Goldberg, 2005, 57), everything following the verb has been elided and the verb does not display any object marking (with the lack of object marking being the key piece of evidence behind Goldberg's (2005) claim that this is an example of verb-stranding VP-ellipsis, and not object drop).

- (80) Juma a-li-beba mtoto na Kamau Swahili
 Juma SM1-PST-carried 1.child and Kamau
 a-li-beba pia.
 SM1-PST-carried too
 ‘Juma carried a child and Kamau did too.’

In the following isiZulu example and the discussion which follows, we see that attempting to construct examples of isiZulu verb-stranding VP-ellipsis is not as straightforward as it is for Swahili.

- (81) *U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and. 1a-Sipho
 u-nike ~~izi-ngane~~ ~~ama-zambane~~.
 SM1a-gave 10-children 6-potatoes
 Intended: ‘Nolwazi gave the children potatoes and Sipho did too.’

(81) was judged to be very bad by five first language isiZulu speakers, with the sixth speaker feeling uncertain about its grammaticality. The source of the ungrammaticality of (81) is twofold. First, the verb in isiZulu must be in the disjoint form if it is not followed by any overt material, as mentioned in 3.3.3. The second source of ungrammaticality in (81) is that when the object of the verb is not present, then object marking on the verb is obligatory. This is shown in the set of examples (82)a-c, where (a) is the grammatical example with the verb in the disjoint form and displaying object agreement. (b) shows that the disjoint form without the object agreement marker is still ungrammatical, while (c) shows that the conjoint form together with the object agreement marker is not grammatical either²⁶.

²⁶ The discussion in 3.3.3 makes it clear that moving any vP internal elements which would follow the verb out of the vP will trigger the disjoint form of the verb, which means that the unpronounced movement copies inside the vP are ignored by whatever mechanism checks to see whether or not the verb is followed by vP internal material. If this mechanism is sensitive to the difference between unpronounced copies and elided material, then it should be possible to have the conjoint form of the verb in ellipsis constructions. If the mechanism is not sensitive to the difference between unpronounced and elided material, then we would expect the verb to be in

- (82)a. U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and.1a-Sipho
 u-zi-nik-ile ~~izi-ngane~~ ~~ama-zambane~~.
 SM1a-OM10-gave-DIS 10-children 6-potatoes
 ‘Nolwazi gave the children potatoes and Sipho did too.’
- b. *U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and.1a-Sipho
 u-nik-ile ~~izi-ngane~~ ~~ama-zambane~~.
 SM1a-gave-DIS 10-children 6-potatoes
 Intended: ‘Nolwazi gave the children potatoes and Sipho did too.’
- c. *U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and.1a-Sipho
 u-zi-nike ~~izi-ngane~~ ~~ama-zambane~~.
 SM1a-OM10-gave 10-children 6-potatoes
 Intended: ‘Nolwazi gave the children potatoes and Sipho did too.’

(82)a is the opposite of (81) in terms of grammaticality judgements, with five speakers finding it to be perfectly grammatical and one speaker being unsure. Because the verb must be marked for agreement with a dropped object, the fact that both objects are missing while only one of them is marked on the verb in (82)a, may mean that this example is indeed verb-stranding VP-ellipsis²⁷ (in spite of the fact that there is no object marking at all in Swahili verb-stranding VP-ellipsis). (82)b and c are both very clearly ungrammatical, with b receiving two bad and four very bad judgements and c receiving one uncertain and five very bad judgements. Both the conjoint-disjoint alternation and the obligatory object marking requirement make the isiZulu examples different to

the disjoint form in ellipsis constructions. Therefore, I include both the conjoint and the disjoint forms in this and other examples.

²⁷ In isiZulu, the verb can only ever agree with one object at a time. See Adams (2010), Zeller (2012 and 2015) for discussion.

Goldberg's (2005) Swahili examples. This pattern is very similar when the complement of the verb is an infinitive clause rather than a DP object as (83)a-d shows.

- (83)a. *U-Nolwazi u-thanda u-ku-dla o-swidi, no-Mbali isiZulu
 1a-Nolwazi SM1a-likes SM1a-INF-eat 2a-sweets and.1a-Mbali
 naye u-thanda ~~u-ku-dla~~ ~~o-swidi~~.
 and SM1a-likes SM1a-INF-eat 2a-sweets

Intended: 'Nolwazi likes to eat sweets and Mbali does too.'

- b. ??U-Nolwazi u-thanda u-ku-dla o-swidi, no-Mbali isiZulu
 1a-Nolwazi SM1a-likes SM1a-INF-eat 2a-sweets and.1a-Mbali
 naye u-ya-ku-thanda ~~u-ku-dla~~ ~~o-swidi~~.
 and SM1a-DIS-OM15-likes SM1a-INF-eat 2a-sweets

'Nolwazi likes to eat sweets and Mbali does too.'

- c. U-Nolwazi u-thanda u-ku-dla o-swidi, no-Mbali isiZulu
 1a-Nolwazi SM1a-likes SM1a-INF-eat 2a-sweets and.1a-Mbali
 naye wa-ye-ku-thanda ~~u-ku-dla~~ ~~o-swidi~~.
 and SM1a.RPST-ASP-OM15-liked SM1a-INF-eat 2a-sweets

'Nolwazi likes to eat sweets and Mbali did too.'

- d. ??U-Nolwazi u-thanda u-ku-dla o-swidi, no-Mbali isiZulu
 1a-Nolwazi SM1a-likes SM1a-INF-eat 2a-sweets and.1a-Mbali
 naye u-ya-thanda ~~u-ku-dla~~ ~~o-swidi~~.
 and SM1a-DIS-likes SM1a-INF-eat 2a-sweets

'Nolwazi likes to eat sweets and Mbali does too.'

In these examples, the complement of the verb *uthanda* is the infinitive phrase *ukudla oswidi*. (83)a is ungrammatical because the verb is in the conjoint form and lacks object

agreement marking, having been judged to be very bad by five speakers, with one speaker feeling uncertain about its status. b contains the object agreement marker *ku-* (which agrees with the infinitive complement of the verb) and the disjoint morpheme *ya-*, which improves the grammaticality of the construction, with two informants judging it to be perfect and the remaining informants each providing one judgment in each of the remaining categories to give a nearly even spread of responses. c is in the remote past tense, with four informants judging it to be perfectly well formed, one judging it to be acceptable and one informant being uncertain. Why the use of the remote past results in c being more widely accepted than b is not clear. In d, the generalisation established (in the previous set of examples) breaks down slightly as the judgements which I received are split, with one speaker finding the example to be perfectly acceptable, two finding it to be merely acceptable, one speaker finding it to be bad and two finding it to be very bad. d shows that some speakers are ok with the object agreement marker being left out if the elided or dropped object is an infinitive.

Recall from section 3.2.3 that Goldberg (2005) argues that the lack of object marking is an indication that her examples are indeed ellipsis and not object drop. For isiZulu, it seems that there is no way to leave out object marking when dealing with DP objects (with the case for infinitival complements being somewhat less clear), but this does not have to rule out the existence of verb-stranding VP-ellipsis in isiZulu on its own. It turns out that in general, it is much more difficult to rule out an object drop analysis for isiZulu as compared to the languages discussed by Goldberg (2005). One of Goldberg's (2005) controls for Hebrew was that animate objects could only be elided along with the entire VP and could not be dropped independently of other VP internal elements. However, in non-elliptical (84), the animate indirect object *izingane* disappears while the direct object *amazambane* remains overt, so it appears that isiZulu does not share Hebrew's ban on dropping animate objects. (84) was judged to be perfectly acceptable by four of my informants, merely acceptable by one informant and the last informant was unsure about its status.

- (84) U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and.1a-Sipho
 u-zi-nik-ile ama-zambane.
 SM1a-OM10-gave-DIS 6-potatoes
 ‘Nolwazi gave the children potatoes and Sipho gave them potatoes too.’

The last of Goldberg’s (2005) controls discussed in section 3.2.3, was that for ditransitive constructions in Hebrew, the indirect object could not be dropped while the direct object remained overt (but the indirect object could be dropped together with the direct object, leading Goldberg (2005) to claim that they had been elided). As the example in (84) shows, the indirect object can be dropped independently of the direct object. (85) shows that the direct object can be dropped independently of the indirect object as well. However, the verb still has to agree with the indirect object.

- (85) U-Nolwazi u-nike izi-ngane ama-zambane, no-Sipho isiZulu
 1a-Nolwazi SM1a-gave 10-children 6-potatoes and.1a-Sipho
 u-zi-nik-ile izi-ngane.
 SM1a-OM10-gave-DIS 10-children
 ‘Nolwazi gave the children potatoes and Sipho gave to the children too.’

Ultimately, it is unclear if the isiZulu examples fail Goldberg’s (2005) controls against object drop, meaning that the missing objects in the isiZulu examples may be null pronouns (*pro*), or if the controls simply do not apply to isiZulu for independent reasons. Therefore, it is unclear whether the examples discussed above involve ellipsis or object drop. For example, the fact that animate objects can be dropped in isiZulu, singly or together with the other object of a ditransitive construction, indicates only that isiZulu does not prevent animate objects from being null pronouns and does not indicate that isiZulu does have verb-stranding VP-ellipsis.

Independently of the work by Goldberg (2005), Buell (2005, 160) has claimed that the missing arguments in the previous examples are a type of VP-ellipsis. This is the only

instance in the literature of a discussion of (verb-stranding) VP-ellipsis in isiZulu that I am aware of. Buell (2005, 160) mentions it as part of his discussion of object agreement markers in isiZulu and does not make reference to work on ellipsis to support his claim. Instead, Buell's (2005, 160) interest lies in showing that the object marker in examples like (85) is not a pronominal clitic. In Buell's (2005, 160) example in (86) he argues that *wa-* cannot be a pronominal clitic. According to him, if *wa-* were a pronoun, (86) would have the reading where the object of the first conjunct and the pronoun in the second conjunct refer to the same two apples (i.e. the 'I' of the first conjunct and 'Sipho' of the second conjunct ate the same two apples) (Buell, 2005, 160).

- (86) Ngi-dle ama-aphula ma-bili no-Sipho u-wa-dlile. isiZulu
 SM1st.SG-ate 6-apples 6-two and.1a-Sipho SM1a-OM6-ate
 'I ate two apples and so did Sipho.'

In other words, if the object agreement marker were a pronominal clitic, then the example would mean something along the lines of, "I ate two apples and Sipho ate them too.", with *them* referring to the same two apples that were eaten by the speaker. But Buell (2005, 160) reports that this example means that the subject of the first conjunct ate two different apples to those eaten by the subject of the second conjunct.

Importantly, in contrast to a pronoun, the second occurrence of a full DP can refer to two different apples (compare "I ate two apples and Sipho ate two apples too.") This shows that *wa-* in (86) is not interpreted as a pronoun, but as a marker expressing agreement with a full object DP *amaphula* in the second conjunct, which has been elided with the VP after verb movement. Buell (2005, 160) therefore concludes that object markers in isiZulu are agreement markers.

Manus and Patin (to appear, 15) follow Ngonyani (1998) in suggesting that objects are not the only elements which can be elided under VP-ellipsis. Although a large part of the literature on verb-stranding VP-ellipsis is devoted to the object drop versus ellipsis question, other ways of testing for the existence of verb-stranding VP-ellipsis do also appear in the literature. I now turn my attention to these other methods and their application to isiZulu.

Following the work by Goldberg (2005) and others, I have attempted to test whether or not (seemingly) elided adverbs are recoverable in isiZulu constructions which might involve verb-stranding VP-ellipsis. The recoverability of elided adverbs is explained through the following example.

(87) Many Durbanites drive badly and many Capetonians do ~~drive badly~~ too.

The elided part of this example can mean only that many Capetonians drive badly and not that they simply drive, or drive in some unspecified manner (i.e. the manner adverb *badly* is recoverable). Goldberg (2005, 91) found that this does not hold for verb-stranding VP-ellipsis in Korean and Japanese as shown in the Korean example in (88) (repeated from (61)) and Ma (2017, 175) showed that it does not hold in isiXhosa either as shown in (89) (repeated from (70)), with both arguing that this suggests that verb-stranding VP-ellipsis is not possible in these languages.

- (88) John-i ppali tali-ko Mary-to tali-nta. Korean
 John-NOM fast run-CONJ Mary-also run-DECL
 ‘John runs fast and Mary *does/runs too.’
- (89) U-John u-thetha isi-Xhosa kakuhle, naye isiXhosa
 1a-John SM1a-speak 6-Xhosa well and
 u-Mary u-ya-si-theta ~~kakuhle~~ ~~isi-Xhosa~~.
 1a-Mary SM1a-DIS-OM6-speak well 6-Xhosa
 Intended: ‘John speaks Xhosa well and Mary does too.’

As with (88) and (89), the focus for the isiZulu examples lies not just on their grammaticality but also on their interpretation. If these examples represent ellipsis, then the adverb in each example will be recoverable, but if they are not ellipsis constructions, then the adverb will not be recoverable. In the isiZulu examples that follow, I discuss the interpretation of each example, which shows that the adverb is not recoverable for

most of my informants. These examples use VP-internal adverbs, which we would expect to be elided under verb-stranding VP-ellipsis.

- (90) *U-Jabu u-cula kabi no-Siyanda naye u-cula isiZulu
 1a-Jabu SM1a-sings badly and.1a-Siyanda also SM1a-sings
~~kabi~~.
 badly
 Intended: ‘Jabu sings badly and Siyanda does too.’

In (90), the adverb *kabi* (‘badly’) has been elided. Because the adverb *kabi* is inside the VP, it triggers the conjoint form of verb in the first conjunct and we would expect it to do the same in the second conjunct if (and only if) the disjoint-conjoint alternation is sensitive to the difference between elided material and unpronounced copies of moved material. But only one of my informants found this construction to be well formed (this informant stated that their judgement was contingent on understanding *kabi* to mean something like ‘extremely’ or ‘extremely well’; in this case, they stated that an ellipsis reading for the second conjunct was possible), with the rest judging it to be bad or very bad. Another attempt at this type of construction in (91), this time with the VP-internal adverb *kakhulu*, is even worse, with all six of my informants finding it to be very bad.

- (91) *U-Andile u-funda kakhulu, noThabo naye isiZulu
 1a-Andile SM1a-reads a lot and.1a-Thabo also
 u-funda ~~kakhulu~~.
 SM1a-reads a lot
 Intended: ‘Andile reads a lot and Thabo does too.’

Using the disjoint form instead of the conjoint form seems to improve at least some of these examples quite notably. (92) still appears to be ungrammatical, with one informant judging it to be acceptable, two being unsure, one judging it to be bad and two judging it to be very bad. However, the informant who judged the construction to be acceptable

noted that it does not have the intended ellipsis reading of ‘sings badly too’ but instead means merely that Siyanda sings, without making any assertions about the manner.

- (92) *U-Jabu u-cula kabi no-Siyanda naye u-ya-cula isiZulu
 1a-Jabu SM1a-sings badly and.1a-Siyanda also SM1a-DIS-sings
~~kabi~~.
 badly
 Intended: ‘Jabu sings badly and Siyanda does too.’

(93) is improved, with three informants finding it to be good, one being unsure and the last two judging it to be bad. Of the three informants who found (93) acceptable, all agreed that the construction does not have the intended ellipsis reading where Thabo also studies a lot and instead only means that Thabo also studies. For this and other similar examples, several of my informants noted that the second conjunct seems to be somewhat semantically incongruent with the first.

- (93) U-Andile u-funda kakhulu, noThabo naye isiZulu
 1a-Andile SM1a-reads a lot and.1a-Thabo also
 u-ya-funda ~~kakhulu~~.
 SM1a-DIS-reads a lot
 ‘Andile reads a lot and Thabo also reads.’

In the final example of this set I have created an example where the adverb *izolo* is elided. This example was judged rather favourably, with three of my informants finding it to be perfectly well formed, two finding it acceptable and the last informant being unsure. However, the status of the ellipsis interpretation for this example is not as clear. Of the three informants who found the example to be perfectly acceptable, only one stated that it clearly has an ellipsis reading (i.e. where Mandisa left yesterday specifically) and one informant felt that the sentence was ambiguous with both the ellipsis reading and the non-ellipsis reading being possible. The other three informants who found (94) grammatical noted that the construction did not have the ellipsis reading

(i.e. it has the reading where Mandisa left with no particular time or manner specified). Another possibility is that this example does not involve ellipsis, and that pragmatic implication supplies the missing content.

- (94) U-Sipho u-hambe izolo no-Mandisa naye u-hamb-ile. isiZulu
 1a-Sipho SM1a-left yesterday and.1a-Mandisa also SM1a-left-DIS
 ‘Sipho left yesterday and Mandisa also left.’

In examples (90) through (94), I have examined verb-stranding VP-ellipsis in isiZulu by trying to determine whether or not VP internal adverbs can be elided. While VP internal adverbs usually trigger the conjoint form of the verb, the examples discussed here show that the verb in the ellipsis clause must be in the disjoint form. This indicates that the mechanism that treats the *vP* as empty (and produces the disjoint form) is not sensitive to the difference between elided material and unpronounced copies of moved elements, if indeed ellipsis has taken place at all. While the grammaticality of the examples is improved by using the disjoint form, only a very few speakers found that an ellipsis interpretation could apply to the examples (90) through (94), with most speakers only accepting the interpretation where the adverb was not recoverable. This argues against verb-stranding VP-ellipsis being possible in isiZulu.

The last means by which I have tried to test for verb-stranding VP-ellipsis in isiZulu was to see if locative arguments of the verb could be elided. IsiZulu does not have locative agreement markers (Zeller, 2012, 220), so if agreement marking is required in object drop but not in ellipsis à la Goldberg (2005), the ability to ‘drop’ locatives that are inside the VP would be a good indicator that verb-stranding VP-ellipsis is possible. (95), where I have tried to elide the locative *eThusini* would suggest that locatives cannot be dropped or elided, with all six informants judging it to be very bad.

- (95) *U-Langa u-ya eThusini, no-Sipho naye u-ya isiZulu
 1a-Langa SM1a-going Howard.Loc and.1a-Sipho also SM1a-going
 eThusini.

Howard.Loc

Intended: ‘Langa is going to Howard and Sipho is too.’

However, as the following examples will indicate, this is not a complete picture. In (96), the verb has been negated and this version of the construction appears to be grammatical, with five of my informants deeming it to be perfectly acceptable, and the sixth finding it merely acceptable.

- (96) U-Langa u-ya eThusini, kodwa u-Sipho aka-yi isiZulu
 1a-Langa SM1a-going Howard.LOC²⁸ but 1a-Sipho NEG.SM1a-going
 eThusini.

Howard.LOC

‘Langa is going to Howard but Sipho is not.’

In addition, three of my informants found that an ellipsis reading was possible for (96), with one other informant stating that both the ellipsis and the non-ellipsis reading could apply and two informants stating that there was no ellipsis reading. The no ellipsis interpretation is quite surprising, as normally the monosyllabic verb *ya* is obligatorily followed by a locative. This example might lead one to suspect that the contrast in polarity between the first and second conjunct creates the necessary focus conditions for verb-stranding VP-ellipsis in isiZulu, but as (97) shows, this is not the case, as five informants found (97) to be perfectly well formed, while just one was uncertain.

²⁸ The locative *eThusini* is the isiZulu name for the Howard College Campus (often referred to simply as ‘Howard’) of the University of KwaZulu-Natal.

- (97) U-Langa aka-yi eThusini, no-Sipho naye isiZulu
 1a-Langa NEG.SM1a-going Howard.LOC and.1a-Sipho also
 aka-yi e~~Thusini~~.
 NEG.SM1a -going Howard.LOC
 ‘Langa is not going to Howard and Sipho isn’t either.’

This time, all five informants who judged the construction to be grammatical also interpreted the construction as having the ellipsis reading. However, I have not been able to find examples outside of constructions involving *ya* where the contrast between conjuncts or the negation of both conjuncts is able to license verb-stranding VP-ellipsis. In (98)a and b I have attempted to see if the adverb *kancane* can be elided when the conjuncts contrast (a) and when both conjuncts have been negated (b). The grammaticality of the constructions is somewhat degraded compared to the previous two examples, with (a) receiving three perfect judgements, one good and two uncertain, and (b) receiving one good, one unsure, one bad and three very bad judgments.

- (98)a. U-Sipho u-shayela kancane, kodwa u-Thabo aka-shayeli isiZulu
 1a-Sipho SM1a-drives slowly but 1a-Thabo NEG.SM1a-drive
 ‘Sipho drives slowly but Thabo doesn't drive.’
- b. *U-Sipho aka-shayeli kancane, no-Thabo naye isiZulu
 1a-Sipho NEG.SM1a-drive slowly and.1a-Thabo also
 aka-shayeli ~~kancane~~.
 NEG.SM1a -drive slowly
 Intended: ‘Sipho doesn’t drive slowly and Thabo doesn't either.’

(98)a did not receive an ellipsis interpretation from any of my informants, and b did not receive an ellipsis interpretation from the one informant who found it to be acceptable.

3.4.3 Is There VP-ellipsis in isiZulu?

This section has covered my own findings for VP-ellipsis and verb-stranding VP-ellipsis in isiZulu. The first result of this section was that isiZulu deficient verbs seem to be able to license a form of ellipsis which looks just like VP-ellipsis in English, which is a surprising result given that Ma (2017) finds that this is not possible in the very closely related language isiXhosa. Object drop is possible in isiZulu, as it is in the languages which Goldberg (2005) used in her systematic discussion of verb-stranding VP-ellipsis. However, it seems much harder to rule out object drop as a source of what would otherwise be verb-stranding VP-ellipsis constructions in isiZulu. In many cases it seems that verb-stranding VP-ellipsis is not possible in isiZulu with most attempts at forming verb-stranding VP-ellipsis constructions producing ungrammatical examples or examples where the elided elements are not recoverable (which is an indication that ellipsis has not actually taken place). This would suggest that grammatical examples are object drop and not ellipsis. These results conform at least partly with Ma's (2017), who found that verb-stranding VP-ellipsis was not possible in isiXhosa. Buell (2005) on the other hand sees examples of object drop where the *pro* analysis would produce an incorrect reading as examples that must involve a type of ellipsis instead. One very narrow context in which verb-stranding VP-ellipsis seems possible involves the monosyllabic verb *ya* in negated sentences. In these examples, the complement of *ya*, which is usually obligatory, is elided but is fully recoverable for almost all my informants. Why the licensing conditions which enable *ya* to be involved in verb-stranding VP-ellipsis cannot be extended to other verbs is not clear, although this may be an indication that the *ya* examples involve pragmatic implication, rather than ellipsis. On the basis of my data, I conclude that verb-stranding VP-ellipsis is not attested in isiZulu. However, as my data set is somewhat small, this is only a tentative finding, with further research being needed to confirm my conclusions.

3.5 Conclusion

This chapter has examined VP-ellipsis. The initial sections dealt with a portion of the very extensive literature on VP-ellipsis in English, describing the basic characteristics of the construction as well as key research areas within the study of VP-ellipsis, such as licensing and recoverability. The second section of this chapter introduced VP-ellipsis as it appears in many other languages, in a form referred to as verb-stranding VP-ellipsis. This section explored work by Goldberg (2005) and others and is the first part of this thesis to deal with non-English data and in particular, Bantu data. Following on from this section, I looked at work by Ma (2017) which deals with ellipsis in the VP domain in isiXhosa, which is closely related to isiZulu. Finally, I discussed my own findings with regard to isiZulu, where it appears that the type of VP-ellipsis found in English may be available but that verb-stranding VP-ellipsis, which is reported to be possible in several other Bantu languages, is probably not attested in isiZulu.

4 Sluicing

4.1 Sluicing in English

4.1.1 Introduction

In this chapter I discuss another type of ellipsis called sluicing. In section 4.1.1, I give a basic outline of what sluicing is. In section 4.1.2.1, I discuss the form which the ellipsis site takes. Just like the previous chapter on VP-ellipsis, this revolves around the debate about whether or not there is ‘hidden’ unpronounced structure within the ellipsis site. Having discussed the evidence in favour of the ellipsis site containing syntactic structure, we would expect this structure to be bound by the usual syntactic constraints; section 4.1.2.2 examines apparent violations of these constraints in the form of sluicing’s apparent ‘immunity’ to islands. The issue of identity comes up once again in section 4.1.3, but unlike in the previous chapter, here we see some evidence that the identity relation may indeed have some syntactic component. Section 4.1.4 details the basic assumptions surrounding licensing and leads into questions about how sluicing may look in *wh*-in situ languages. Section 4.2.1 introduces the findings for sluicing in other Bantu languages and 4.2.2 shows my findings for isiZulu. 4.3 concludes the chapter.

The first mention of sluicing in the literature is generally attributed to Ross (1969). Sluicing constructions involve two CPs, with the second CP often being embedded within a matrix CP which is co-ordinated with the first CP. As with VP ellipsis, the first CP forms the antecedent for the CP which contains the ellipsis site. In the elliptical CP, the *wh*-phrase has moved to [spec, C] via *wh*-movement (Merchant, 2001, 45). Merchant (2013, 85) treats the TP of the elliptical CP and everything dominated by the TP as the ellipsis site. The example in (1) shows a sluicing construction.

- (1) John is visiting someone, but I don’t know who ~~John is visiting~~.

The correlate of the *wh*-phrase is often indefinite, as with *someone* in this example, though it does not always have to be, as shown by (2), adapted from Merchant (2008, 147).

(2) Mbali speaks isiZulu, but I don't know what other languages ~~Mbali speaks~~.

Van Craenenbroeck and Merchant (2013, 718) class sluicing as a type of clausal ellipsis because it elides nearly an entire clause, with only one or two elements from that clause surviving. Other types of clausal ellipsis include gapping, stripping and null complement anaphora (NCA). However, gapping, stripping and NCA are often analysed as constructions which are formed using wholly different syntactic operations to those which are used to form sluicing constructions (van Craenenbroeck and Merchant, 2013, 718). Merchant (2001) analyses sluicing as a construction which is formed in very much the same way as VP-ellipsis (see 4.1.2 for discussion).

Along with standard sluicing constructions like those in (1) and (2), several subtypes of sluicing have also been identified. Examples (3) to (5) are from van Craenenbroeck and Merchant (2013, 717). In (3), the *what* of the elided clause has no direct correlate in its antecedent clause; this specific type of sluicing is known as *sprouting*. In (1), the *wh*-phrase of the sluiced clause *who* is the object of *visiting* and this corresponds with *someone* which is the object of *visiting* in the antecedent clause. In (3), *what* in the sluiced clause is the object of *eat*, but in the antecedent clause, *eat* does not have an object, meaning that *what* has no overt correlate (van Craenenbroeck and Merchant, 2013, 718).

(3) Ed is eating but I don't know what ~~Ed is eating~~.

(4) Ed gave a lecture, but I don't know what about ~~Ed gave a lecture~~.

(4), a *swiping* construction, is noteworthy because before *wh*-movement and pied-piping, the order of the *wh*-phrase and preposition would have been preposition then *wh*-phrase (*about what*), but following movement and ellipsis, this order has been inverted to *what about*, i.e. *wh*-phrase and then preposition (van Craenenbroeck and Merchant, 2013, 718) ((4) is also a sprouting construction, because *what about* has no correlate in the first conjunct).

- (5) Jef eid iemand gezien, mo ik weet nie wou da. Dutch
 Jef has someone seen but I know not who that
 ‘Jef saw someone, but I don't know who.’

(5) is an example of *spading*, which is found in Frisian, French, Czech, Northern Norwegian, Serbo-Croatian and some dialects of Dutch and German (van Craenenbroeck and Merchant, 2013, 719). Its noteworthiness comes from the fact that the *wh*-phrase (*wou* in this example) is followed by a demonstrative pronoun (*da*).²⁹

4.1.2 The Ellipsis Site in Sluicing

4.1.2.1 Nature of the Ellipsis Site

As with VP-ellipsis, an important area of research in sluicing is the attempt to show that the ellipsis site does indeed contain fully-fledged syntax which is not (immediately) visible because the elements in the ellipsis site go unpronounced at PF. Drawing once again on van Craenenbroeck and Merchant (2013) and Merchant (2001), amongst others, this section will explore the arguments brought to bear in favour of the ellipsis site containing fully articulated, but unpronounced, syntactic structure.

²⁹ Merchant (2004), argues that fragment answers like the one in (i) are also a product of sluicing. I do not discuss fragment answers as they are not part of the core literature on sluicing and are not relevant for my own isiZulu data at the end of the chapter.

(i) Q: What did you buy?
 A: A computer.

- (7)a. Er will jemandem schmeicheln, aber sie wissen German
 he wants someone.DAT flatter but they know
 nicht, wem er ~~schmeicheln~~ will.
 not who.DAT he flatter wants
 ‘He wants to flatter someone, but they don’t know who.’
- b. *Er will jemandem schmeicheln, aber sie wissen German
 he wants someone.DAT flatter but they know
 nicht, wer er ~~schmeicheln~~ will.
 not who.NOM he flatter wants
 Intended: ‘He wants to flatter someone, but they don’t know who.’
- c. *Er will jemandem schmeicheln, aber sie wissen German
 he wants someone.DAT flatter but they know
 nicht, wen er ~~schmeicheln~~ will.
 not who.ACC he flatter wants
 Intended: ‘He wants to flatter someone, but they don’t know who.’

The examples in (6) and (7) are from German, but Merchant (2001, 90) claims that the *wh*-phrase must also match the case of its unelided correlate in other languages with morphological case, such as Greek, Russian, Polish, Czech, Slovene, Finnish, Hindi, Hungarian and Basque. The standard assumption is that case is assigned by the verb, with *schmeicheln* assigning dative case to its complement in these examples. As van Craenenbroeck and Merchant (2013, 723) point out, this is not a problem for the unelided *wh*-question where the case assigner is obviously present, but if there was no syntax in the ellipsis site of sluicing constructions, then it would not be clear how the *wh*-phrase of the second clause would get its case assigned to it.

Another syntactic mechanism which falls out naturally if we assume that sluices do contain syntactic structure, but which would require special explanation if the ellipsis

site were truly empty, is binding. In the following example from van Craenenbroeck and Merchant (2013, 724), the (copy of the) pronoun *his* (a bound variable) in the second clause must be bound from within the ellipsis site.

- (8) Every professor_i wanted to talk about one of his_i books, but I don't remember which one of his_i books ~~every professor_i wanted to talk about~~.

In this example, *his* in the second conjunct cannot take its bound variable reading from the quantifier *every professor* in the first conjunct (van Craenenbroeck and Merchant, 2013, 724). Instead, it can only be bound by the unpronounced quantifier in the second clause, which is contained within the ellipsis site and c-commands the copy of the moved *wh*-phrase which includes *his*. Van Craenenbroeck and Merchant (2013, 724) take this as an indication that the ellipsis site contains syntactic structure. To show that this is indeed the case, compare (8) with (9). In (9), *his* in the second conjunct cannot be bound by *every professor* in the first conjunct. (9) is only grammatical with free reference of *his*, which is a slightly odd interpretation:

- (9) Every professor_i wanted to talk about one of his_i books, but I don't remember which one of his_{*i/j} books Mary liked.

As with VP-ellipsis, the possibility of A-movement, head movement and A'-movement out of the ellipsis site has been explored in sluicing with regard to the content (or lack thereof) of the ellipsis site. The first type, A-movement, cannot be investigated because the only potential landing sites for A-movement are within TP, which is elided (van Craenenbroeck and Merchant, 2013, 720).

What is of interest however, is that there appears to be no head movement out of sluicing constructions (van Craenenbroeck and Merchant, 2013, 720). In the following example the strong [Q] feature of C should attract the auxiliary in T, moving it out of the TP and leaving it overtly realised after TP has been elided.

(10) A: John has invited someone to his office.

B: Really? Who (*has)?

If it is indeed the TP that is deleted, then the question is why *has* has not moved to C via head movement. Van Craenenbroeck and Merchant (2013, 720) answer this question by suggesting that head movement is somehow ‘bled’ by ellipsis. Lasnik (1999, 208) offers a more detailed and somewhat elegant solution to this question. He notes that in non-elliptical *wh*-questions failing to move the auxiliary to T would leave a strong feature on T unchecked, leading to a PF crash. But if sluicing is the PF deletion (or non-parsing) of the TP, then the errant strong feature should not be present at PF and thus there should be no crash. This also ties in with the idea that head movement is a PF phenomenon. However, the lack of head movement in sluicing contrasts with VP-ellipsis, where head movement out of the ellipsis site is possible and is responsible for creating verb-stranding VP-ellipsis. Adopting Lasnik’s (1999) explanation of why there is no head movement in sluicing would be a problem for this analysis of verb-stranding VP ellipsis. Another problem with Lasnik’s (1999) approach is that the standard assumption is that it is a strong feature on C which triggers T-to-C movement, and this feature would not be deleted by eliding the TP.

The assumption articulated in Merchant (2001, 2008, amongst others) is that the *wh*-phrase which immediately precedes the ellipsis site got to be there by leaving the ellipsis site through the normal mechanics of *wh*-movement. In order to show that the *wh*-phrase did indeed arrive in its position via A`-movement, van Craenenbroeck and Merchant (2013, 721) appeal to data from island effects, which are the topic of the following section.

4.1.2.2 ‘Immunity’ to Islands

One particular phenomenon that has received a great deal of attention in the literature related to sluicing is the apparent ability of *wh*-movement in sluicing to ignore islands

which should block A'-movement or mark it as illicit. While it has no direct impact on the study of whether or not ellipsis is possible in isiZulu, this unexpected behaviour of *wh*-movement out of sluiced TPs is frequently mentioned in the literature on sluicing. I therefore address it here, in order to situate the current discussion in the wider body of work on Minimalist syntax.

The sentence in (11), from Merchant (2001, 5), is ungrammatical as the *wh*-phrase *which* of the second conjunct has been extracted from the relative clause construction *someone who speaks which* (the strikethrough in this example indicates the unpronounced copy of the moved *wh*-phrase, not ellipsis).

- (11) *They want to hire someone who speaks a particular Balkan language, but I can't remember which they want to hire someone who speaks ~~which~~.

The relative clause in this example forms an island and should be impenetrable for grammatical operations such as movement. However, in the following example from Merchant (2001, 6), we see that the sluiced version of (11) is fully grammatical.

- (12) They want to hire someone who speaks a particular Balkan language, but I can't remember which ~~they want to hire someone who speaks~~.

Under the movement and ellipsis-analysis of sluicing outlined above, the ellipsis site in (12) should have the same syntax as the unelided second clause of (11) and therefore should contain a relative clause island. Therefore, (12) should be an island violation, due to the extraction of the *wh*-phrase from that island. However, (12) is grammatical. Merchant (2001, 115) notes that this type of example has often been taken as evidence in favour of the ellipsis site lacking syntactic content (see for example Lobeck (1995), Chung, Ladusaw and McCloskey (1995) or Hardt (1999)). Merchant (2001), at some length, discusses alternative analyses where sluicing constructions are thought not to contain syntactic structure. These alternatives include LF copying mechanisms such as

the one proposed by Chung, Ladusaw and McCloskey (1995) (Merchant 2001, 146) and resumptive elements which are responsible for filling in the otherwise empty ellipsis site, as proposed largely by Merchant (2001, 128) himself. However, due to the facts discussed above (among others), which suggest that the ellipsis site does contain syntactic structure, Merchant (2001, 159) maintains the assumption that the syntax of the ellipsis site is the same as that of its unelided correlate.

This leaves Merchant (2001) with an issue, as he must now account for why (12) is grammatical even though the syntactically identical (11) is not. Merchant (2001, 163) does this by dividing islands up into three types. The first type of island which Merchant (2001, 162) identifies are *selective islands*, which he claims are a type of semantic or pragmatic island. The second type are *PF islands* (Merchant, 2001, 163), which consist of left-branches, COMP-trace effects, derived positions in topicalisations and subjects and co-ordinated structures. The third type of island are *propositional islands* (Merchant 2001, 208), which consist of conjuncts, relative clauses, sentential complements to head nouns and finally, adjuncts. Merchant's discussion of each of these different types of island is quite complex and a full discussion of each type of island would take us on some rather long tangents. Instead, I give a brief and simplified summary of what Merchant (2001) has to say about these different types of islands as they relate to the apparent ability of sluices to ignore islands.

Selective islands, also referred to as 'weak' islands, arise because of semantic scope effects (Merchant, 2001, 227). The discussion of selective islands is an interesting part of the literature in that sluicing is not immune to selective islands. The difference in grammaticality between (13)a and b, from Merchant (2001, 227) (originally from Albert (1993)), is linked to the scope of the *wh*-phrase and its implicit correlate (Merchant, 2001, 227). According to Merchant (2001, 228), the contrast between (13)a and b is not based on differences in the syntax of these examples, but rather on differences in scope, with the difference in scope of the *wh*-phrase in the elliptical clause and of its implicit correlate in the antecedent giving rise to the selective island and resulting in ungrammaticality (Merchant, 2001, 228).

- (13)a. Sonny always eats around noon, but I don't know what ~~Sonny always eats around noon~~.
- b. *Sonny rarely eats around noon, but I don't know what ~~Sonny rarely eats around noon~~.

Sluicing is immune to PF islands. Merchant (2001, 163) uses left branch extractions as his prototypical example of a PF island. In example (14)a we see that the A'-extraction of just the DegP *wh*-phrase results in ungrammaticality (Merchant 2001, 164). Notice in (14)b that pied-piping the entire nominal phrase which contains the DegP (an FP, according to Merchant – see below) is grammatical. Both examples are from Merchant (2001, 164)

- (14)a. *How detailed does he want a ~~how detailed~~ list
- b. How detailed a list does he want?

The source of the ungrammaticality of (14)a is a violation of the Left Branch Condition. The Left Branch Condition (LBC) in its original formulation by Ross (1967) states that no NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule (Merchant 2001, 163).³⁰ But in example (15), we see that the sluiced correlate of (14)a is grammatical.

- (15) He wants a detailed list, but I don't know how detailed ~~he wants a list~~.

According to Merchant (2001, 169), the DegP *how detailed* moves from within the DP *a how detailed list*, to [spec, F], where F is the highest functional projection of the DP. This produces the FP *how detailed a list*. He argues that FP has a strong [wh] feature,

³⁰ Most mentions of the LBC in the literature seem to use this original formulation, even when talking about leftmost elements other than NPs being moved out of an NP. In (14) for example, it is a DegP which is moved out of the NP.

which is checked by pied-piping the entire FP to [spec, C], which explains (14)b. (14)a is ungrammatical, because moving just the DegP from [spec, F] to [spec, C] leaves the strong [wh] feature on FP unchecked. This unchecked uninterpretable feature is the cause of the ungrammaticality of (14)a. (15) should be ungrammatical for the same reason that (14)a is ungrammatical, but Merchant (2001, 169) suggests that sluicing, as a type of deletion at PF, removes the unchecked feature, preventing a PF crash.

For propositional islands, Merchant (2001, 208) tries to show that no island is actually present. For example, in (16)a, from Merchant (2001), it appears as though the *wh*-phrase has been extracted out of a co-ordinated conjunct, which should be an island. However, Merchant (2001, 225) proposes that the form which this example takes is actually the one shown in (16)b, where no propositional island is present.

- (16)a. Bob ate dinner and saw a movie last night, but he didn't say which; ~~he ate dinner and saw t_1 that night.~~
- b. Bob ate dinner and saw a movie last night, but he didn't say which; ~~he saw t_1 that night.~~

With this multifaceted approach to islands, Merchant (2001) is able to maintain his assertion that the ellipsis site in sluicing does contain syntactic structure. Sluicing is not actually immune to selective islands although these islands are semantic in nature and so data pertaining to selective islands is not particularly relevant to the debate around the syntactic content of sluices. For propositional islands, no island violations occur because sluicing in these contexts does not actually involve any island. In PF islands, island violations do occur, but they are remedied when the unchecked feature which would cause an island violation is deleted through ellipsis³¹.

³¹ Fox and Lasnik (2003) propose a related analysis where sluicing is a 'last resort' style mechanism which is invoked specifically to delete island violations which arise due to their claim that sluicing involves one-fell-swoop movement of the elliptical *wh*-phrase.

4.1.3 Identity

As with VP-ellipsis, the question of whether the antecedent and ellipsis site are linked by semantic or syntactic identity is tested by seeing whether or not semantic and syntactic mismatches are allowed (van Craenenbroeck and Merchant, 2013, 724). If syntactic mismatches between the ellipsis site and its antecedent are tolerated, while semantic mismatches are not, then this would imply that the identity relation is semantic in nature, but if semantic mismatches are tolerated while syntactic ones are not, then this would suggest that the identity relation is syntactic in nature.

One of the ways in which the ellipsis site may differ from its antecedent in sluicing is in finiteness (van Craenenbroeck and Merchant, 2013, 724). In the following examples from van Craenenbroeck and Merchant (2013, 724), the interpretation of the ellipsis site must differ from its antecedent with respect to finiteness. In (18), the antecedent *I'll fix the car* is finite while the ellipsis site must be interpreted as the infinitive *how to fix the car*. The corresponding finite interpretation, *how I'll fix the car*, while grammatical, is not what the sentence means. In (19), the antecedent is in the infinitive, while the ellipsis site is finite. The corresponding infinitive interpretation *but I don't remember when meeting him* is ungrammatical.

(18) I'll fix the car if you tell me how.

= how to fix the car.

Not: how I'll fix the car.

(19) I remember meeting him, but I don't remember when.

= when I met him.

Not: *when meeting him.

According to van Craenenbroeck and Merchant (2013, 725), the difference in finiteness is a syntactic mismatch, with the semantics of each clause being identical. The syntactic mismatch is based on the formal features of T, with finite T being +[finite] and being valued for tense and non-finite T being –[finite] and unspecified for tense. As the syntactic mismatch is tolerated while there is no semantic mismatch, sluicing constructions involving mismatches in finiteness suggest that the identity relation is a semantic one.

As noted in the section 3.1.3, voice mismatches are tolerated in VP-ellipsis, but not in sluicing. (20), from Merchant (2013, 78), shows an example of VP-ellipsis where the antecedent is active and the elliptical clause is passive.

(20) The janitor must remove the trash whenever it is apparent that it should be ~~removed~~.

To briefly recapitulate the relevant aspects of section 3.1.3, mismatches in voice are strictly syntactic mismatches. The semantic details of the mismatched clauses are identical. In VP-ellipsis, a syntactic mismatch between the ellipsis site and its antecedent is grammatical, which was taken as strong evidence in favour of the identity relation being semantic in nature. In (21), from Merchant (2013, 81), we see that voice mismatches are not tolerated in sluicing.

(21) *Joe was murdered, but we don't know who ~~murdered Joe~~.

Merchant (2013, 89) concludes from this, and other similar examples, that voice mismatches are only tolerated in VP-ellipsis because the head which distinguishes active and passive sentences lies outside the ellipsis site, and so any syntactic mismatch involving voice is not visible to the identity mechanism. When the head responsible for distinguishing active and passive lies within the ellipsis site, as it does in sluicing, voice mismatches are not tolerated (Merchant, 2013, 92). This piece of evidence suggests that

the identity relation is syntactic in nature, which goes against a lot of the other arguments discussed in this thesis which pointed towards semantic identity.

Sprouting constructions offer problems for both the syntactic and the semantic approaches to identity in sluicing. In (22), from van Craenenbroeck and Merchant (2013, 725), the antecedent clause uses the intransitive form of *eat*. However, in the sluiced clause, the elided *eat* is transitive, with *what* as its object. Van Craenenbroeck and Merchant (2013, 725) note that the ellipsis site and its antecedent mutually entail each other so there is no semantic mismatch in this example. However, they also note that there is a clear syntactic mismatch between the two clauses; unless, that is, one were to make the assumption that the implied object of the intransitive *eat* is in fact represented syntactically.

(22) She was eating (pro) but I don't know what ~~she was eating~~.

In the next example, again from van Craenenbroeck and Merchant (2013, 725), we see a sprouting construction where neither the semantic entailment nor the syntax of the two clauses matches.

(23) She finished her homework, but it's not clear with whose help ~~she finished her homework~~.

In this example, a theory of syntactic identity faces the challenge of having to match the antecedent clause, where there is no overt adverbial PP, with the sluiced clause, which contains a complex adverbial PP (van Craenenbroeck and Merchant, 2013, 725). A theory of semantic identity runs into the problem that finishing one's homework does

not entail finishing one's homework with help. As such, neither a semantic nor a syntactic approach to identity can adequately account for the sprouting data.³²

While Merchant (2001) pursues a semantic explanation for identity, Merchant (2013) is forced to acknowledge that there is a syntactic aspect to the identity relation and recoverability of sluicing constructions which is not captured by his earlier theory. Van Craenenbroeck and Merchant (2013) further muddy the waters by showing that sprouting constructions offer problems for both the syntactic and the semantic approaches to identity.

4.1.4 Licensing in Sluicing

Merchant (2001) treats sluicing and VP-ellipsis as essentially the same type of ellipsis phenomenon where the only difference between the two is the size of the ellipsis site which is determined by the position of the [E] feature that licenses ellipsis. Having covered some of this in the chapter on VP-ellipsis in 3.1.5, I will not need to go into as much detail here. For sluicing, [E] starts out in T and moves to a C that is [+wh, +Q] in order for [E] to be checked (Merchant, 2001, 60). Merchant (2001, 60) gives [E] its own feature requirements which need to be checked by moving [E] to a C that is [+wh, +Q]. The fact that [E] ultimately resides on a C that is [+wh, +Q] means that sluicing will only apply in *wh*-questions and that a *wh*-phrase will always precede the ellipsis site. [E] instructs PF not to parse its complement (Merchant, 2001, 60), which is the TP in sluicing. As with VP-ellipsis, the ellipsis site must be e-given.

Tying [E] to the features of constituent questions explains why sluicing only occurs in constituent questions (van Craenenbroeck and Merchant, 2013, 729). As the following examples from van Craenenbroeck and Merchant (2013, 729) (originally from Merchant

³² In the light of some of the unresolved issues surrounding the content of the ellipsis site, one might be tempted to pursue an analysis of sluicing that assumes that there is no syntactic content to the ellipsis site. Culicover and Jackendoff (2005, 266) present just such an approach in their work on *Simpler Syntax*.

(2001)) show, the TP cannot be elided outside of questions where there is a *wh*-phrase, even when the potential ellipsis site has an antecedent.

- (24)a. *It was painted, but it wasn't obvious that ~~it was painted~~.
- b. *The Pentagon leaked that it would close the Presidio, but no one knew for sure whether ~~it would close the Presidio~~.
- c. *Sue asked Bill to leave, but for ~~Bill to leave~~ would be unexpected.

This accounts for sluicing in English. However, sluicing is also found in other languages, some of which do not form their constituent questions exactly as English does. Citing van Craenenbroeck and Liptak (2005, a.o.), van Craenenbroeck and Merchant (2013, 730) present a slightly updated version of the feature specification of [E], which can apply cross-linguistically. They state that in a particular language, the syntactic features which are checked by [E] are the same as those which a *wh*-phrase must check in that language. In van Craenenbroeck and Merchant's (2013, 730) Hungarian example in (25), where the *wh*-phrase moves to a pre-verbal focus position, [E] will move to this same position and sluicing will elide the sister of this focus head, instead of the whole TP.³³

- (25) János meghívott egy lányt, de nem tudom hogy kit. Hungarian
 John invited a girl but not know that who
 'John invited a girl, but I don't know who.'

While not strictly *wh*-in situ, this example shows that sluicing is possible in languages where the *wh*-phrase does not move as high as [spec, C]. Merchant (2001, 84) discusses the possibility of sluicing in *wh*-in situ languages. He rejects the idea that Japanese has

³³ Furthermore, van Craenenbroeck and Merchant (2013, 730) show that because *wh*-phrases must only check a strong [Foc] feature in Hungarian (and therefore [E] in Hungarian only needs to check strong [Foc]), sluicing in Hungarian is licensed in contexts other than constituent questions where a strong [Foc] feature needs to be checked.

wh-in situ sluicing (Merchant cites Inoue (1976) as the first to discuss *wh*-in situ sluicing in Japanese) but he does note that Hindi and Turkish, despite being *wh*-in situ languages, may have sluicing constructions that mirror English sluicing³⁴. The following is an example from Hindi-Urdu, taken from Manetta (2013, 3).

- (26) Māĩ=ne yahãã kisi=ko dekh-aa par Hindi-Urdu
 1st.SG=ERG here someone.OBL=ACC see-PFV.M.SG but
 mujhe nahĩĩ pataa kis=ko.
 1st.SG.DAT not know who.OBL=ACC
 ‘I saw someone there, but I don’t know who.’

4.2 Sluicing in Bantu

4.2.1 Sluicing in Other Bantu Languages

Sluicing seems to have received fairly little attention in the literature on ellipsis in Bantu. Bassong (2014) is the first to have examined sluicing in a Bantu language. He finds that sluicing is possible in Basàá (Bassong, 2014, 451). Manus and Patin (to appear) have found that sluicing is attested in Swahili and Shingazidja. According to Bassong (2014, 294), *wh*-phrases in Basàá can appear immediately after the verb or at the left edge of the sentence. Sluicing in Basàá only occurs when the *wh*-phrase is at the left edge of the sentence (Bassong, 2014, 294). An example of a Basàá question with the *wh*-phrase at the left edge of the sentence is shown in (27) from Bassong (2014, 296). Manus and Patin (to appear) do not discuss the canonical position of *wh*-phrases in Swahili and Shingazidja, though Matu (1991, 31) presents the example in (28) which shows that fronted *wh*-phrases are attested in Swahili.

³⁴ Van Craenenbroeck and Merchant (2013, 730) make a claim that is somewhat at odds with this, stating that the type of clausal ellipsis which is attested in a language is dependent upon the type of *wh*-movement which is attested in a language.

- (27) Njée mudaá a-bí-ḡomá yaaní? Basàá
 1.who 1.woman SM1-PST-meet 1.yesterday
 ‘Who did the woman meet yesterday?’
- (28) Lini Juma a-li-kuja? Swahili
 when Juma SM1-PST-come
 ‘When did Juma come?’

In (29), I present one of Bassong’s (2014, 451) examples. According to Bassong (2014, 98), the evidentiality marker, *nû*, shows that the *wh*-phrase, *njé(é)*, has been fronted. Everything following the evidentiality marker, which immediately follows the *wh*-phrase, has been elided.

- (29) ŋgim mùt i-ḡ-táVḡé háná, me ḡ-yí ḡé Basàá
 INDF man SM-PST-pass here I PST-know NEG
 mé yḡ, ndí me m-ḡatḡá lé tòḡ njé(é)
 I.EMPH him but I PRE-wonder that whether 1.who
 nû ~~a-ḡ-táVḡé~~ háná.
 1.EVID SM1-PST-pass here
 ‘Someone passed here, I did not know him. But I wonder who?’

(30), also from Bassong (2014, 451), where the *wh*-phrase is *kíí* and the evidentiality marker is *î*, is very similar to the previous example.

- (30) Maangé a-m-mil ɲgim yǒm, mé ń-yí Basàá
 1.child SM1-PRE.swallow INDF 9.thing I PRE-know
 6é mé yɔ, me ń-bat6á lé tòó
 NEG I.EMPH it I PRE-wonder that whether
 kíí î a-m-mil.
 9.what 9.EVID SM1-PST-swallow
 ‘The child has swallowed something. I don’t know it, but I wonder what?’

Manus and Patin (to appear, 53) show that sluicing is also possible in Swahili and Shingazidja, as the following examples show.

- (31) Juma a-na-ku-la na m-tu si-ju-i Swahili
 Juma SM1-PRE-OM15-eat with 1-person 1st.SG.NEG-know-NEG
 na nani.
 with who
 ‘Juma is eating with someone, I don’t know with who.’
- (32) Djumwá ɲgu-l-w=(y)é na=m-ndru Shingazidja
 Juma PRE.SM1-eat-PRE=PRO1 and=1-person
 ɲgam-djuzis-o ná=ndó(=βí).
 PRE.SM1st.SG-wonder-PRE with=who=FOC
 ‘Juma is eating with someone, I wonder with who.’

They also show that sprouting is possible in both these languages, as shown in (33) and (34) (Manus and Patin, to appear, 55), where the *wh*-phrase has no overt correlate in the antecedent clause (Manus and Patin, to appear, 55).

- (33) Juma a-me-m-kamata punda na-ji-uliza Swahili
 Juma SM1-PST-OM1-catch 9.donkey PRE-REF-wonder
 na ki-tu gani.
 with 7-thing which
 ‘Juma caught the donkey, I wonder what with?’
- (34) Djumwá ha-zingar=é m-pundrá Shingazidja
 Juma SM2.PFV-catch=AUG1 1-donkey
 ŋgam-djuzis-w (h)á=(hi)ndri=ní.
 PRE.SM1st.SG-wonder-PRE with=what=FOC
 ‘Juma caught the donkey, I wonder what with?’

4.2.2 Sluicing in isiZulu

In this section, I begin with a short discussion of the surface positions of *wh*-phrases in isiZulu. Following this, I present my findings for sluicing in isiZulu. As with the Bantu languages just discussed, sluicing does appear to be attested in isiZulu, although my data is somewhat limited and I only have evidence for sprouting specifically.

Sabel and Zeller (2006, 271) show that *wh*-phrases can surface in two different positions in isiZulu. This is shown in their examples from Sabel and Zeller (2006, 271). (35)a shows the *wh*-in situ option, where the *wh*-phrase for ‘what’, *-ni*, is suffixed to the verb. b shows that the *wh*-phrase may also appear as an independent morpheme in the form of *ini*.

- (35)a. U-bona-ni? isiZulu
 2nd.SG-see-what
 ‘What do you see?’

- b. U-bona ini? isiZulu
 2nd.SG-see what
 ‘What do you see?’
- (36)a. Y-ini o-yi-bona-yo? isiZulu
 COP-what.9 RC2nd.SG-OM9-see-RS
 ‘What is it you see?’
- b. Ng-ubani o-m-bona-yo? isiZulu
 COP-1a.who RC2nd.SG-OM1a-see-RS
 ‘Who is it that you see?’

(36)a and b from Sabel and Zeller (2006, 272) show the *wh-ex situ* option. Sabel and Zeller (2006, 272) analyse the *wh-ex situ* construction as a cleft construction based on the fact that copulative verbs (in the form of *y-* in (36)a and *ng-* in b³⁵) always appear on the *wh*-phrase when it is *ex situ*. Although *yini* appears at the front of the sentence in (36)a (and *ngubani* in (36)b), Sabel and Zeller (2006, 278) argue that the *wh*-phrase in copulative *wh*-constructions is the specifier of a focus phrase which lies between VP and TP. This is based on two pieces of evidence. The first is that in embedded sentences, the *wh*-phrase appears after the complementizer, as Sabel and Zeller’s (2006, 277) example in (37) shows, where the *wh*-phrase, *ngubani*, appears after the complementiser *ukuthi*.

- (37) U-cabanga ukuthi ng-ubani aba-the u-sebenzile? isiZulu
 2nd.SG-think that COP-who.1a RC3rd.PL-said SM1a-worked
 ‘Who do you think they said worked?’

³⁵ The form of the copulative verb is based on the noun class of the noun to which it attaches (Sabel and Zeller, 2006, 272).

The second piece of evidence is that subject *wh*-phrases that are not in the copulative form are banned from appearing in [spec, T].³⁶ According to Sabel and Zeller (2006, 273), this indicates that non-copulative *wh*-phrases must be below the TP as well. Sabel and Zeller's (2006, 273) example in (38) shows that it is ungrammatical for the subject (non-copulative) *wh*-phrase to appear in [spec, T].

- (38) *Ubani u-fikile? isiZulu
 who.1a SM1a-arrived
 Intended: 'Who arrived?'

Having established what run-of-the-mill *wh*-questions look like in isiZulu, I now present my own data for sluicing constructions in isiZulu. As stated above, my findings are somewhat limited in that I only have data that shows that sprouting is possible in isiZulu and was not able to collect enough useful data for 'standard' sluicing or any of its other subtypes.

(39) shows an example of sprouting in isiZulu. The antecedent is *imoto ipakwe otshanini*. As with the English examples, the elliptical CP is embedded within another CP. The *wh*-phrase in this example is *eyabani*; everything following the *wh*-phrase has been elided.

- (39) I-moto i-pakwe o-tshan-ini; thola isiZulu
 9-car SM9-park LOC.14-grass-LOC find out
 ukuthi e-yabani ~~i-moto~~ ~~i-pakwe~~ ~~o-tshan-ini~~.
 that RC9-whose 9-car SM9-park LOC.14-grass-LOC
 'A car is parked on the grass; find out whose.'

³⁶ In fact, all focused elements are banned from appearing in [spec, T] in isiZulu (Sabel and Zeller, 2006, 274).

(39) was judged by six informants and was very favourably received. Three of my informants rated it as perfectly acceptable, two found it merely acceptable and the last informant found it to be very bad.

In (40), everything following the *wh*-phrase *ubani omunye* has been elided. This example was not as well received as (39), but was still judged to be acceptable by half of my informants. It received one perfect rating, two acceptable ratings, one unsure and two very poor. For this particular example, I collected judgements for its non-elliptical counterpart as well. The non-elliptical version of (40) received four perfect ratings and one acceptable rating, with the least favourable rating being ‘unsure’.

- | | | | | | | | | |
|------|---------|----------|-----------------|--------------------------------------|--------|--------|--|---------|
| (40) | U-Beth | u-be | lana, | kodwa | qagela | ukuthi | | isiZulu |
| | 1a-Beth | SM1a-was | here | but | guess | that | | |
| | ubani | o-munye | o-be | lana. | | | | |
| | who | 2a-else | SM2a-was | here | | | | |
| | | | | ‘Beth was here, but guess who else.’ | | | | |

In both (39) and (40), the *wh*-phrase appears after the complementizer *ukuthi*. This is consistent with the *wh*-ex situ position in isiZulu questions. In addition, the verb has been elided in these examples, further suggesting that the *wh*-phrase has moved out of the VP. However, the copulative verb is not affixed to the *wh*-phrases in these examples³⁷, which is unexpected, given that Sabel and Zeller (2006) show that *wh*-ex situ in isiZulu is a cleft construction involving a copulative verb. As a brief speculation as to why the copulative form is not found in these examples, I would like to suggest that sluicing is able to license the *wh*-ex situ form in isiZulu without the need for the copulative verb. Perhaps in a similar way to the one in which Merchant (2001) and Fox and Lasnik (2003) assume that deletion at PF is able to rescue what would otherwise be

³⁷ A small caveat to this point is that Sabel and Zeller (2006, 272) note that *ubani* can take a zero copulative morpheme. Therefore, the copulative cannot be ruled out for the *ubani* examples without checking tone, as there is a tonal difference between the copulative and non-copulative form of *ubani* (Sabel and Zeller, 2006, 272). I did not investigate this aspect and so it remains open for future research.

illicit movement, the *wh*-phrase in isiZulu is able to move in a way which would not be available without ellipsis.

The following example was only judged by two speakers, but both rated it as perfectly well-formed. In this example, everything following the *wh*-phrase *ngobani*³⁸ has been elided.

- (41) I-ngane i-ya-khala kodwa angi-azi nga-ubani isiZulu
 9-child SM9-DIS-crying but NEG.SM1st.SG-know about-who
 i-ngane i-yakhala.
 9-child SM9-crying
 ‘The child is crying, but I don’t know why.’

My last example was also rated as perfectly well formed by both of the informants who judged it. In this example, everything following the *wh*-phrase, *nini*, has been elided.

- (42) U-John u-fike izolo kodwa angi-azi isiZulu
 1a-John SM1a-arrived yesterday but NEG.SM1st.SG-know
 nini u-John u-fike izolo.
 when 1a-John SM1a-arrived yesterday
 ‘John arrived yesterday but I don’t know when.’

In each of these examples, any material following the *wh*-phrase is not pronounced but is still part of the meaning of the example. As such, I take it that these are examples of sluicing in isiZulu. More specifically, these examples appear to be sprouting, as in none of these examples does the *wh*-phrase have an overt correlate in the antecedent clause. In (39), *eyabani* has no correlate in the first conjunct, and neither do *ubani omunye*, *ngobani*, or *nini* in (40), (41) and (42), respectively. A shortcoming of the present study

³⁸ Vowel coalescence rules in isiZulu turn the combination of the ‘a’ of *nga-*, ‘with’, and the ‘u’ of *ubani* into ‘o’. Vowel coalescence also occurs with *angi-azi*, which is pronounced as *angazi*.

is that I have only collected data on sprouting. Nevertheless, the data presented in this section does suggest that sluicing is attested in isiZulu, which matches the findings for other Bantu languages which were discussed in 4.2.1.

4.3 Conclusion

This chapter has examined the ellipsis construction known as sluicing. The initial sections of this chapter showed that sluicing is a type of clausal ellipsis which is similar to VP-ellipsis. As with VP-ellipsis, there is a lot of debate about whether or not the ellipsis site contains unpronounced syntactic structure and about the nature of the identity relation between the ellipsis site and its antecedent. 4.1.2 examined arguments surrounding the nature of the ellipsis site, with 4.1.2.1 looking at arguments from the literature that show that the ellipsis site does have syntactic content. 4.1.2.2 is considered counterevidence to this claim, in the form of sluicing's apparent ability to violate island constraints. However, Merchant (2001) shows that some island violations do still result in ungrammaticality, that some apparent island violations are not island violations at all, and that some violations that should indeed result in ungrammaticality are rescued by ellipsis. The debate surrounding the identity relation is very much the same in sluicing as it is in VP-ellipsis. However, while the arguments for semantic identity were stronger for VP ellipsis, the picture is much less clear in sluicing, mostly due to the fact that voice mismatches are not tolerated in sluicing. As far as I am able to tell, this issue remains unresolved in the literature. With regard to licensing, I once again turned to Merchant (2001), who provides an analysis based on the idea that there is an [E] feature which licenses ellipsis. The existence of sluicing in Bantu has been investigated fairly recently, albeit sporadically, with Bassong (2014) and Manus and Patin (to appear) showing that sluicing is attested in Basàá, Swahili and Shingazidja. Although limited in scope, my data shows that sluicing is possible in isiZulu as well.

5 Gapping

5.1 Gapping in English (and Other Languages)

5.1.1 Introduction

This chapter focuses on gapping. Gapping is a type of ellipsis construction in which the main verb, and possibly more, is elided from the second conjunct of a co-ordinated construction. (1)a shows a simple example of gapping where only the verb has been gapped. In (1)b the verb and part of its VP complement have been elided.

- (1)a. John likes apples and Mary ~~likes~~ bananas.
- b. John likes bringing flowers to his mother and Mary ~~likes bringing flowers~~ to her grandmother.

Gapping was first named and discussed in Ross (1967) (Coppock, 2001, 1). The discussion of gapping in the literature is not couched in quite the same way as that of VP ellipsis and sluicing. The terms such as identity, recoverability and licensing which were all important in chapters 3 and 4 do not seem to appear very often in the literature on gapping. As shall be seen, however, issues such as syntactic and semantic constraints on gapping which would form the fundamental part of the discussion of identity and licensing and recoverability, do nevertheless have a key place in the discussion of gapping as it appears in the literature. In this chapter, I give an outline of the basic observations about gapping and its particular properties in section 5.1.2. This is followed in sections 5.1.3 and 5.1.4 by two prominent, opposing accounts of how gapping works. 5.1.5 contains a short discussion on the type of gapping referred to as bare argument ellipsis or stripping and section 5.1.6 is a discussion of pseudogapping. 5.2 looks at gapping, stripping and pseudogapping in Bantu languages, with 5.2.1 discussing the data that already exists for other Bantu languages and 5.2.2 discussing my findings with regard to these constructions in isiZulu. 5.3 contains my concluding remarks for this chapter

5.1.2 Properties of Gapping

5.1.2.1 Basic Observations

On the surface, gapping does not appear to be very different to VP ellipsis as it elides the verb (along with additional material) (Johnson, 2008b, 74). However, while both VP ellipsis and gapping elide the verb, the first easily observable difference between the two is that in VP ellipsis, the ellipsis site is followed by a focus particle such as *too* while in gapping, the ellipsis site (also simply referred to as the ‘gap’) is usually followed by a remnant with lexical content. Johnson (2008b, 74) notes that, like VP ellipsis, gapping can target strings which would not be considered to form a constituent, but herein also lies a point where the two diverge. In example (2) from Johnson (2008b, 74) the gapped words *spoke* and *loudly* do not form a constituent, but at the same time they do not form a contiguous string either. The ability to gap discontinuous strings is not a property of VP ellipsis, but is a property of gapping (Hartmann, 2000, 146). (3) is taken from Hartmann (2000, 146) and is another example of a discontinuous string being gapped.

- (2) Some spoke to Max loudly, and others ~~spoke~~ to Skitty ~~loudly~~.
- (3) Peter caught an eel for Mary in the Charles River and John ~~caught~~ a flounder ~~for Mary~~ in the Missisquoui.

The next easily observable difference between VP ellipsis and gapping relates to the licensing condition on VP ellipsis. The ellipsis site in VP ellipsis is always immediately preceded by an auxiliary (Johnson, 2008b, 75) which, in Merchant’s analysis of VP ellipsis, hosts the [E] feature which licenses VP ellipsis (and similarly, the ellipsis site in sluicing is always preceded by a *wh*-phrase which hosts [E]). As can be seen in the preceding examples, gapping constructions do not appear to be headed by some especially significant syntactic element (Johnson, 2008b, 75).

Another key feature which has been observed for gapping constructions is that the subject remnants in the gapped clause must contrast with their correspondents in the antecedent clause (Johnson, 2014, 2). Hartmann (2000, 162) specifies that this contrast must be a semantic one. Her examples in (4)a-c show the need for this semantic contrast (Hartmann, 2000, 163). In (4)a, the subject, *you*, and the remnant, *the book*, each contrast with their respective correlate, *I* and *the newspaper*. In (4)b the subject and its correlate do not contrast and in (4)c the object remnant and its correlate do not contrast, which causes each example to be ungrammatical. The remnants and their correspondents must also be of the same syntactic category as shown in (4d), where the DP *reptiles* is not of the same category as *PRO to talk to John*, which is a CP (Hartmann, 2000, 162).

- (4)a. I read the newspaper and you ~~read~~ the book.
- b. *I read the newspaper and I ~~read~~ the book.
- c. *I read the newspaper and you ~~read~~ the newspaper.
- d. *Sam hates reptiles and Sandy ~~hates~~ PRO to talk to John.

The example in (5), adapted from Johnson (2014, 2), shows that constructions where only some of the remnants contrast with their correspondents in the antecedent clause are somewhat degraded compared to examples where all the remnants and their correspondents contrast.

- (5)a. I want to try to begin to write a novel and Mary ~~wants to try to begin to write~~ a play.
- b. ??I want to try to begin to write a novel and Mary ~~wants to try to begin to write~~ a play.

Another difference between VP-ellipsis and gapping is that gapping is only found in coordinations (Johnson 2008b, 75). VP-ellipsis can occur in disjunction, such as in adjunct

and embedded clauses (as shown in (6)b and (7)b)³⁹, but as (6)a and (7)a show, gapping is not possible in these contexts. (6) and (7) are adapted from Johnson (2008b, 76).

(6)a *Some went to Holland because others ~~went~~ to Spain.

b. Some went to Holland because others had ~~gone~~ to Spain.

c. Some went to Holland and others ~~went~~ to Spain.

(7)a *Carrie hasn't eaten kale, but I met a man who hasn't ~~eaten~~ asparagus.

b. Carrie hasn't eaten kale, but I met a man who has ~~eaten~~ asparagus.

(6)a and (7)a show that gapping is not possible in adjunct and embedded clauses respectively. The (b) examples reaffirm that VP ellipsis is possible in these contexts and (6)c shows that a very similar construction to (6)a is grammatical when the two clauses are co-ordinated. However, two possible exceptions to the restriction that gapping can only occur in co-ordinations are mentioned in the literature and are given in (8) and (9), taken from Johnson (2014, 1).

(8) Sally met more parents than Tom ~~met~~ kids.

(9) A: Who met whom?

B: Jerry ~~met~~ Sarah; Sally ~~met~~ Mark; and Trish ~~met~~ Betsy.

³⁹ These two examples are pseudogapping constructions. The discussion in 5.1.6 will show that pseudogapping is a type of VP-ellipsis.

5.1.2.2 Restrictions on Remnants and Other Observations

While the gapped string does not form a syntactic constituent, the remnants of gapping are subject to two syntactic constraints. The first is that the remnant must only consist of maximal projections (Hartmann, 2000, 147). In example (10), adapted from Hartmann (2000, 149), we see that by itself, the preposition *under* cannot be a gapping remnant as it is just a head.

(10) *Karl lays the tubes over the plaster and Peter ~~lays~~ the cable under ~~the plaster~~.

The next set of data comes from particle and prefix verbs in German. In German there is a distinction between particle verbs and prefix verbs, in that with particle verbs, the preposition can be separated from the verb, but with prefix verbs, the preposition cannot be separated from the verb (Zeller, 1999, 37). This is best illustrated in verb second contexts. In particle verb constructions, when the verb moves to the C-position, the preposition is stranded in its base position (Zeller, 1999, 37), as shown in (11)a (and in fact cannot accompany the verb, as shown in (11)b). In prefix verb constructions, the preposition cannot be stranded, as shown by (12)a, and must move along with the verb, as shown in (12)b.

- | | | |
|--------|--|--------|
| (11)a. | Peter steigt aus dem Bus aus. | German |
| | Peter climbs out of the bus out | |
| | ‘Peter climbs out the bus.’ | |
| b. | *Peter aus-steigt aus dem Bus. | German |
| | Peter out-climbs out of the bus | |
| | Intended: ‘Peter climbs out the bus.’ | |

- (12)a. *Peter fährt den Wald durch. German
 Peter drives the forest through
 Intended: ‘Peter drives through the forest.’
- b. Peter durch-fährt den Wald. German
 Peter through-drives the forest
 ‘Peter drives through the forest.’

Because of their separability, particle verbs in German and Dutch are often analysed as consisting of a verb and a full phrase (see van Riemsdijk 1978; Den Dikken 1995; Zeller 2001, and references cited therein), while prefix verbs are analysed as complex morphological heads where the preposition does not project to the phrase level (Hartmann, 2000, 151). (13), from Zeller (1999) (quoted in Hartmann (2000, 151)), shows gapping of the base verb in a particle verb construction.⁴⁰ Since the prepositional part of the particle verb is a maximal projection, gapping the verb *steigt* leaves behind a PP consisting of the prepositional particle *aus*, which can stand on its own as a remnant of gapping (Hartmann, 2000, 151).

- (13) Weil Peter ein-steigt und Hans aus-steigt. German
 Because Peter in-climbs and Hans out-climbs
 ‘Because Peter climbs in and Hans out.’

On the other hand, a prefix verb, as shown in (14) (also originally from Zeller (1999)), cannot be a remnant of gapping because it does not form a maximal projection. While gapping the verb of the particle verb construction was possible, gapping the verbal part of the prefix verb leaves only a P⁰ head, which is ungrammatical.

⁴⁰ Unlike (11) and (12), (13) and (14) are subordinate clauses, not full sentences.

- (14) *Weil Martin den Wald durch-fährt und
 Because Martin the forest through-drives and
 Hans die Stadt um-fährt.
 Hans the the city around-drives
 Intended: ‘Because Martin drives through the forest and Hans around the city.’

The second constraint on gapping remnants is that the remnant must be a ‘major constituent’ as laid out by the *Major Constituent Condition* (Hankamer, 1973, 18). The *Major Constituent Condition* defines a major constituent as a constituent immediately dominated by S⁴¹ or immediately dominated by a VP that is immediately dominated by S. Examples (15) and (16) from Hartmann (2000, 147) seek to show that even when dealing with a maximal projection, the projection must be immediately dominated by S₀ or the VP immediately dominated by S₀.

- (15) *John spoke to Fred and Mark ~~spoke to~~ Peter.
 (16) *John spoke to the visitor from France and Mark ~~spoke to the visitor~~ from Belgium.

In both of these examples, the remnant is a maximal projection, but the sentence is still ungrammatical. According to Hartmann (2000, 148), this is because *Peter* in (15) is the complement of the preposition *to* and is therefore not immediately dominated by the VP. In (16) *from Belgium* is a PP maximal projection but it is immediately dominated by the projection of the noun *visitor* and not by the VP or S₀. The ungrammaticality of examples (12) and (14) through (16) arises because the remnants in these examples do not qualify as major constituents.

⁴¹ S is the ‘sentence’ node from older versions of Generative Grammar. It is the node which immediately dominates the subject NP/DP and predicate VP nodes. In more modern versions of MP, the S node has been abandoned in favour of a more nuanced syntactic representation of multiple aspects of the sentence. This includes shifting the subject to a VP internal position and the inclusion of additional functional heads above the verb (in particular T ‘tense’ and C ‘complementizer’), with the highest node of the sentence being the CP.

In minimalist terms, the *Major Constituent Condition* could be restated along the following lines: A major constituent is any constituent directly dominated by a VP whose extended projection is selected by C.

Islands, which were previously discussed in the section on sluicing 4.1.2.2, once again rear their heads in the discussion of gapping. Coppock (2001, 9) observes that gapping shares the multifaceted interaction with islands which Merchant (2001) showed for sluicing. With a few exceptions, movement in gapping is able to violate PF islands (Coppock, 2001, 10) but not propositional islands (Coppock, 2001, 13) which is also the case in sluicing. For example, the extraction⁴² of *too weak* from *too weak an espresso* in (17) should be a left branch constraint violation, but it seems that this type of PF island violation is not a problem in gapping. However, extracting out of a conjunct is not possible in gapping, as shown in (18), where the remnant *IBM* cannot be extracted out of *an astronaut or the CEO of IBM* (Coppock 2001, 13).

(17) I make too strong an espresso, and Fred ~~makes too weak an espresso~~.

(18) *Jill wants to become an astronaut or the CEO of Xerox, and Bob ~~wants to become an astronaut or the CEO of IBM~~.

For Hartmann (2000, 147), the fact that the restrictions on what can be a remnant of gapping are directly related to syntactic elements such as heads, maximal projections and syntactic islands is a clear indication that there are syntactic restraints placed on gapping constructions.

5.1.3 Johnson's Approach

As with other types of ellipsis, the literature on gapping is vast and I could not hope to give an exhaustive discussion of the many analyses of gapping and their many nuances. Instead I have again selected an analysis which I have identified as prominent within the literature which I will contrast with a competing analysis in the following section. In

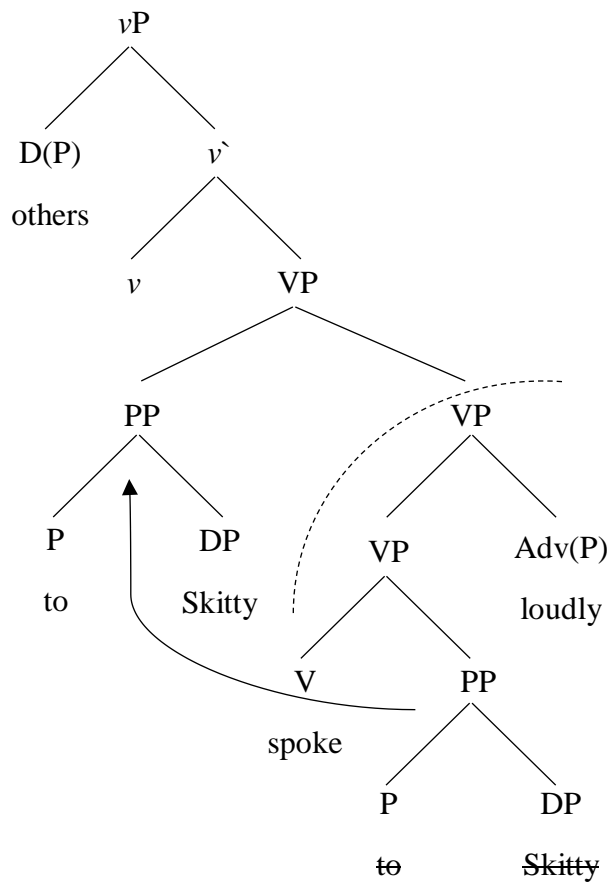
⁴² This pre-empts the discussion of the actual mechanics of gapping, which is still to come, but the idea that the remnant survives ellipsis by moving out of the ellipsis site is consistent with Johnson's analysis of gapping that will be discussed in 5.1.3.

this section, I discuss the movement-based account of ellipsis put forward by Johnson (2008b, 2009, 2014, a.o.). Johnson (2008b, 75) notes that the differences between VP ellipsis and pseudogapping on the one hand, and gapping on the other, that were discussed in section (4.2.1) have led many researchers to treat VP ellipsis (together with pseudogapping) and gapping as fundamentally different phenomena. Johnson's analysis of gapping is notably quite different to the other approaches to the analysis of ellipsis that are discussed in this thesis. Johnson (2008a, 16) argues that gapping is a wholly different type of construction to sluicing and VP ellipsis, and in fact he classes sluicing and VPE as 'true' ellipsis constructions and gapping as a type of movement operation whose final product superficially appears similar to the 'true' ellipsis constructions.

The first key point of Johnson's approach to gapping as it appears across its various iterations (see for example, Johnson (2008b, 2009, 2014, a.o.)) is the claim that gapping is fed by movement, or in other words, that the strings which are elided by gapping are strings that have been created by movement (Johnson, 2014, 20). Johnson (2014, 22) claims that the strings which are elided by gapping are in fact constituents, but that they are constituents out of which something has moved. The gapped constituent in (2) (repeated here as (19)) is shown in (20). Although it appears that two separate strings have been gapped, it is in fact just the VP that has been gapped, but the PP *to Skitty* has been moved out of the VP and has adjoined to its left edge.

(19) Some spoke to Max loudly, and others ~~spoke~~ to Skitty ~~loudly~~.

(20)



Johnson (2014, 22) notes that the type of movement which produces gapping remnants is constrained in particular ways. As shown in (21), from Johnson (2014, 12), this movement operation cannot strand a preposition by moving a DP out of a PP (in this case the DP *a pen* cannot be moved out of the PP *with a pen*), which ordinarily should be possible in English as shown in (22) (Johnson, 2014, 22) where the preposition *with* is stranded.

(21) *Charley writes with a pencil and John ~~writes with~~ a pen.

(22) Charley likes the pen that John writes with.

Johnson (2014, 22) also notes that infinitival clauses can be moved and surface as remnants, while embedded VPs may not. This is shown in (23)a, where the infinitival clause *to review a play* is the gapping remnant, and b, where the VP *review a play* cannot be a remnant. Both examples are from Johnson (2014, 14).

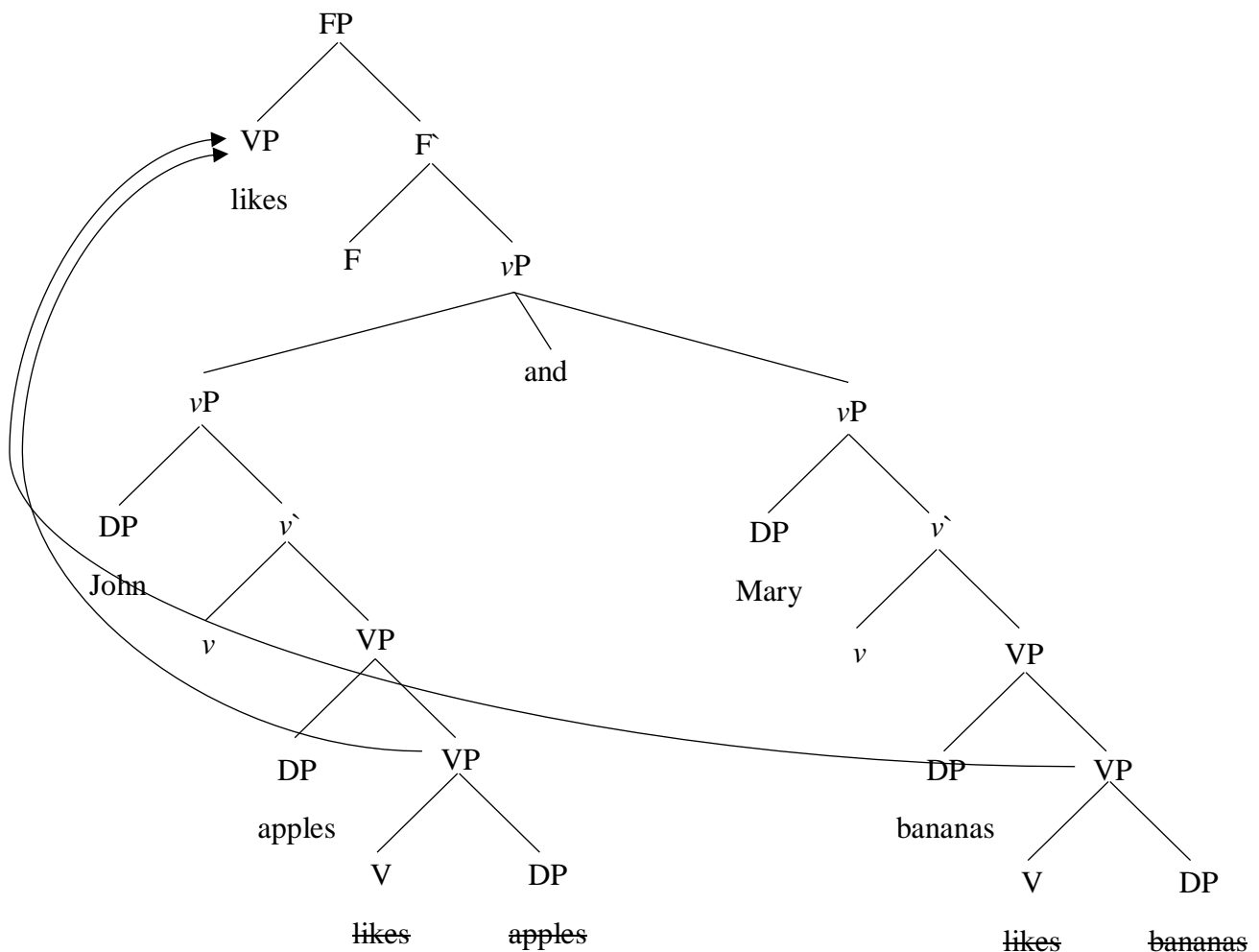
- (23)a. I want to try to begin to write a novel, and Mary ~~wants to try to begin~~ to review a play.
- b. *I want to try to begin to write a novel, and Mary ~~wants to try to begin~~ to review a play.

These constraints lead Johnson (2014, 22) to claim that it is specifically scrambling that is responsible for moving remnants out of gapped constituents. According to Johnson (2014, 22), scrambling is constrained in these same ways, although he does note that it is not clear if scrambling can apply to infinitival clauses. Johnson (2014, 22) highlights the fact that requiring the gapped string to be a string out of which something has scrambled allows us to explain the constituent condition that applies to the remnants of gapping. If the remnant of a gapping construction is the output of a scrambling movement, then the remnant will be of a form which scrambling is able to target (Johnson, 2014, 22) (i.e. it will be the type of constituent which is able to be moved by scrambling). Johnson (2014, 24) himself notes that a problem with this approach is that it requires scrambling to be possible in English, contrary to what has been observed. It would also require the assumption that scrambling is productive only in gapping and nowhere else in English (Johnson 2014, 24).

The mechanism which Johnson (2008b, 2009) assumes is responsible for eliding the gapped material is the point where his approach to gapping deviates significantly from other analyses of ellipsis. Johnson (2008b, 79) claims that rather than being elided in the sense discussed in previous chapters of this thesis, the gapped material has in fact been moved (following the scrambling of the remnants) and so the gap is of the form of a trace or unpronounced movement copy. His analysis works as follows. First, Johnson treats the two conjuncts of the co-ordination as co-ordinated *v*Ps rather than CPs

(Johnson, 2008b, 81). The remnant in the second conjunct is scrambled and so is its correspondent in the first conjunct. Following the two scrambling moves, the VPs of each conjunct are moved across-the-board and adjoin to FP (Johnson, 2008b, 79), with F being a head that takes the conjoined v Ps as its complement. This results in both VPs being left as traces or unpronounced copies of the ATB-moved VP, which is pronounced just once in its higher position.

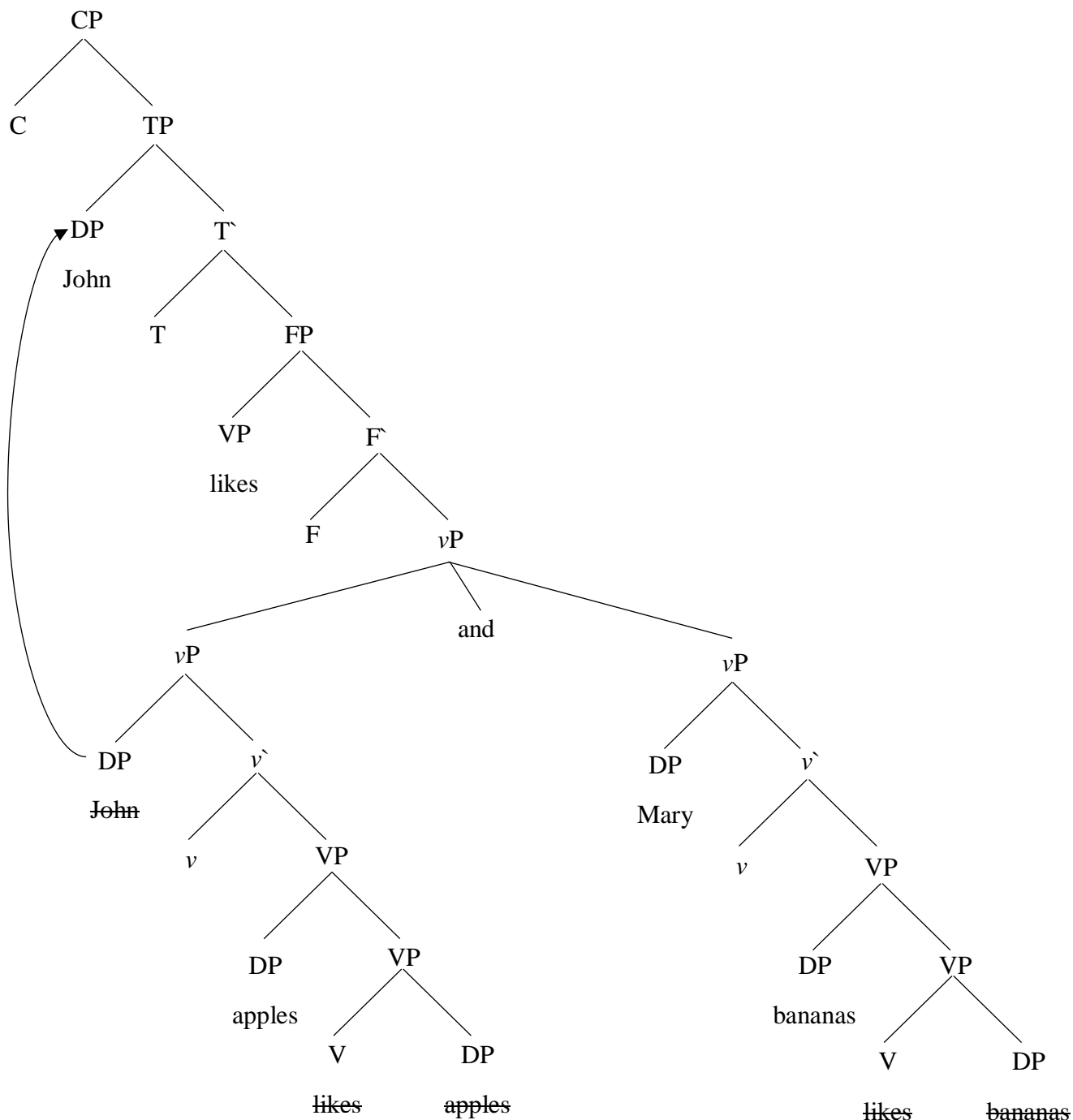
(24)



Finally, the subject of the first v P conjunct moves from its VP-internal base position to [spec, T] while the subject of the second v P remains VP-internal⁴³ (Johnson, 2008b, 80).

⁴³ As Johnson (2008b, 81) himself notes, this movement step is certainly a violation of the Co-ordinate Structure Constraint. However, Johnson (2008b, 81) avoids what should be a fairly serious problem with his analysis by claiming that the Co-ordinate Structure Constraint is a semantic constraint and that the movement of the subject from [spec, v] to [spec, I] is semantically vacuous and therefore does not violate the constraint.

(25)



Some such as Coppock (2001) take issue with Johnson's theory of gapping. One of Coppock's key arguments against a movement-based analysis of gapping comes from gapping constructions with a split antecedent. Gapping constructions may, in some circumstances, have a split antecedent, or in other words, two separate antecedents

(Coppock, 2001, 8). According to Coppock (2001, 8), this is a problem for an ATB movement approach to gapping, as the two strings which are to be moved are not identical. The following example from Coppock (2001, 8), shows a gapping construction with a split antecedent.

- (26) John calls home on Sundays, and Jill balances her checkbook every other week, but neither very consistently.

In this example, both *calls home on Sundays* and *balances her checkbook every other week*, are antecedents for the gap in the final clause. This is because the gapped string simultaneously confers both these meanings. However, ATB movement should not be able to target two different strings and so it seems that ATB movement is unable to account for (26).

5.1.4 Hartmann's Approach

Hartmann (2000, 156) is also not satisfied with Johnson's movement-based account of gapping, stating that it "involves the abandoning of too many well-motivated syntactic principles."⁴⁴ She suggests an account of gapping which is much more in keeping with the others discussed in this thesis. This section deals with Hartmann's (2000) approach to gapping, which treats it as a type of PF deletion.

Hartmann (2000, 156) notes that at first glance it is always the finite part of the verb that is left out in a gapping construction and that while other elements can be dropped along with the verb, the finite part of the verb is obligatorily dropped. However, according to Hartmann (2000, 156), it is not actually the verb itself that must be gapped, but rather the assertion feature carried by the finite verb. Hartmann (2000, 158) argues that this assertion feature enters the derivation as part of the verb but is associated with the

⁴⁴ Hartmann is referring to an earlier (1994) version of Johnson's (2008b) account, but the issues which she highlights are present in more recent versions of Johnson's work too.

complementizer position. This is motivated by the following examples from Hartmann (2000, 157), where gapping the verb in an embedded clause is only possible when the complementizer is gapped as well. Note that Hartmann's (2000) analysis treats the antecedent and elliptical phrases in gapping as full CPs, not just VPs.

(27)a. Jim said that Alan went to the ballgame and ~~that~~ Betsy ~~went~~ to the movies.

b. *Jim said that Alan went to the ballgame and that Betsy ~~went~~ to the movies.

In Hartmann's (2000, 160) German V2 examples, where the verb moves to C, the verb is gapped in the complementizer position. She argues that in her examples in (29) showing gapping in embedded clauses where V-to-C movement is blocked, the assertion feature is dissociated from the verb and moves to the complementizer, which is then gapped. Example (28) shows that the verb can be gapped in the verb second position in German.

(28) Peter reist mit seiner Frau nach Indien und German
 Peter travels with his wife to India and
 Martin ~~reist~~ mit seinen Kollegen in die Schweiz.
 Martin travels with his colleagues in the Switzerland
 'Peter travels to India with his wife and Martin to Switzerland with his colleagues.'

(29)a. Ich glaube dass Peter mit seiner Frau nach German
 I believe that Peter with his wife to
 Indien reist und ~~dass~~ Martin mit seinen Kollegen in die
 India travels and that Martin with his colleagues in the
 Schweiz ~~reist~~.
 Switzerland travels
 'I believe that Peter travels to India with his wife and Martin to Switzerland with his colleagues.'

- b. *Ich glaube dass Peter mit seiner Frau nach Indien reist und dass Martin mit seinen Kollegen in die Schweiz reist.
 I believe that Peter with his wife to India travels and that Martin with his colleagues in the Switzerland travels
 German
 Intended: ‘I believe that Peter travels to India with his wife and Martin to Switzerland with his colleagues.’

In example (29)a, the verb *reist* has moved to C in both conjuncts and is gapped in the second conjunct in C. In b, we see that failing to gap the complementizer when the verb is gapped results in ungrammaticality (Hartmann, 2000, 157).

One problem that arises from allowing the assertion feature to move to C is that it is no longer clear why the verb itself should be gapped, and not just the complementizer alone (Hartmann, 2000, 161). Hartmann (2000, 161) suggests that the verb does not actually need to be gapped and that an example like (30) could be treated as an example of gapping where the complementizer has been gapped while the verb remains unelided. This suggestion does not come without potential criticism, with Hartmann (2000, 161) noting that this example may simply involve two co-ordinated IPs, without any gapping taking place.

- (30) I believe that John read the newspaper and ~~that~~ Harry read the book.

When it comes to the actual mechanism by which the gapped material is elided, Hartmann (2000, 172) notes that there is a close link between strings that can be deaccented and the strings that can be gapped, in a similar vein to Merchant’s (2001) analysis of VP ellipsis and sluicing. As discussed in 3.1.2, a string which conveys information that is already known can be deaccented and, under the right conditions, deaccented strings can be elided. Hartmann (2000, 108) treats gapping as the ‘total

reduction' of a string which conveys given information. Like Merchant's approach to ellipsis, this is a PF process (Hartmann, 2000, 156).

As mentioned in 5.1.2, the remnants of gapping are marked with contrastive focus (Hartmann, 2000, 163). The phonological phrases which contain the contrastively focused elements have their pitch accents strengthened in both the antecedent and the gapped clauses (Hartmann, 2000, 169). According to Hartmann (2000, 168), it is ultimately the strong pitch accent on the focused phrase that ensures that the phrase is interpreted as bearing contrastive focus. This means that contrast between remnants and their correlates is realised at the phonological phrase level (Hartmann, 2000, 166). Due to the issues with Johnson's (2008, a.o.) approach, I find Hartmann's (2000) approach to gapping to be more convincing.

5.1.5 Stripping

This section looks at stripping, which is usually regarded as a type of gapping. Although stripping receives much less attention in the literature than run-of-the-mill gapping does, I have included it here as it is highly relevant for my findings with regard to gapping in isiZulu. As noted by Lobeck (1995, 26), stripping constructions were first discussed by Ross (1967), although the term 'stripping' first appears in Hankamer and Sag (1976, 409). Stripping also appears in the literature under the name of 'bare argument ellipsis'. Hankamer and Sag (1976, 408) place gapping and stripping under the same umbrella as constructions which involve ellipsis at the clause level. Hankamer and Sag (1976, 409) define stripping as a rule that deletes an entire clause except for one constituent in that clause. Clause-initial adverbs and negatives may also survive stripping (Hankamer and Sag, 1976, 409). (31) from Lobeck (1995, 27) is an example of a stripping construction where only the subject, *John*, and the adverb (or focus particle), *too*, have survived.

(31) Jane loves to study rocks and John ~~loves to study rocks~~ too.

Like Hankamer and Sag (1976), Lobeck (1995, 28) notes that stripping is quite similar to gapping. Van Craenenbroeck and Merchant (2013, 719) and Wurmbrand (2017, 341) also class stripping as a type of clausal ellipsis which is closely related to gapping. Johnson (2014, 3) states that examples like (31) can be classed as gapping constructions and likewise Merchant (2003, 83) states that stripping is usually analysed as a type of gapping.

In fact, defining stripping as a subtype of gapping may be putting things the wrong way around. Merchant (2016, 9) states that gapping is probably just stripping, with the addition of a remnant. This would mean that stripping is the more basic construction, with gapping being a version of stripping where a remnant has been rescued from the clause, prior to ellipsis. Johnson (2014, 23) shows that stripping examples can be accounted for under his movement-based analysis of gapping by simply leaving out the two scrambling steps which precede ATB movement, thereby not producing a remnant.

5.1.6 Pseudogapping

In this section, I take a brief look at pseudogapping. I begin by outlining the basic features of pseudogapping. Following this, I cover one analysis of the mechanism which produces pseudogapping constructions. The section ends off with a discussion of pseudogapping in languages other than English. Because pseudogapping is generally accepted to be a subtype of VP ellipsis, which has already been extensively discussed in chapter 3, this section is relatively short, as its purpose is only to highlight the traits of pseudogapping which differentiate it from gapping and ‘run-of-the-mill’ VP ellipsis.

Pseudogapping, as its name implies, is not actually a type of gapping construction. Van Craenenbroeck (2017, 3), states that pseudogapping was originally treated as a type of gapping construction, but that it is now widely recognised as a type of VP ellipsis where a remnant has been extracted from the elided VP. Lasnik (1999, 201) cites Levin (1978)

as the key original work on pseudogapping. An example of a pseudogapping construction is shown in (32).

(32) Nick drinks more whiskey than Adam does ~~drink~~ beer.

On the one hand, pseudogapping resembles gapping, because just as in gapping constructions, the verb (*drink* in (32)) has been elided and there is a remnant (in this case the DP *beer*) following the ellipsis site. As in gapping, the remnant must contrast with its correlate in the antecedent clause (Gengel, 2007, 30). As the contrast between (33)a and b shows, pseudogapping constructions are not grammatical when the remnants do not contrast. These examples are from Gengel (2007, 20). In (33)a, the DP *Jane* contrasts with the DP *Mary* and the sentence is grammatical, but (33)b is not grammatical, because the remnant DP, *Sara*, is identical to its correlate in the antecedent clause.

(33)a. John invited Sarah, and Mary will ~~invite~~ Jane.

b. *John invited Sara, and Mary will ~~invite~~ Sara.

On the other hand, pseudogapping also resembles VP ellipsis in that the ellipsis site is preceded by an auxiliary or modal (Gengel, 2007, 30), which in (32) is *does* and in (33) is *will*. However, the main difference between gapping and pseudogapping, which at the same time is a similarity between pseudogapping and VP ellipsis, is that pseudogapping is not restricted to co-ordination (Johnson 2014, 7). As was discussed in 5.1.2.1, gapping is restricted to co-ordinations while VP ellipsis can appear in co-ordination and in embedded and subordinate clauses as well. Pseudogapping shares this trait with VP ellipsis.⁴⁵ This is the main and most frequently cited piece of evidence which has been put forward in the literature in support of the idea that pseudogapping is a type of VP

⁴⁵ While this point, in general at least, seems to be taken for granted in the literature, Gengel (2007, 20) does report that some pseudogapping constructions are degraded (though not outright ungrammatical) when the two clauses are joined by something other than co-ordination.

ellipsis and not a type of gapping. This is seen in the following set of examples, with (34)a showing pseudogapping in an adjunct clause, b showing pseudogapping in a comparative clause and c showing pseudogapping in a relative clause. (34)a is from Johnson (2008b, 76), while I have adapted b from his example.

- (34)a. Will went to Holland because Mary had ~~gone~~ to Spain.
- b. Will goes to Holland less often than Mary does ~~go~~ to Spain.
- c. Bill bought the same book from Adams that Mary had ~~bought~~ from CNA.

Another reason that pseudogapping is thought to be different from gapping is that the scope of negation differs between these two constructions. In (35)a, the negation which is present in the antecedent is interpreted to be present in the gapped constituent as well (Gengel, 2007, 36). In (35)b on the other hand, the ellipsis site is not interpreted as being negated.

- (35)a. Andrew won't eat vegetables and Mary ~~won't eat~~ meat.
- b. Andrew won't eat vegetables, but Mary will ~~eat~~ meat.

One of the advantages of Johnson's (2008b) analysis of gapping, where gapping involves conjoined VPs, is that in this analysis, the negative element is in a position to scope over both VPs, accounting for the negative interpretation of the gapped clause. For Johnson (2008b), pseudogapping (as a type of VP ellipsis and not a construction produced by ATB movement) involves two fully fledged clauses, with each clause being able to express negation independently of the other. If gapping is treated as a type of clausal ellipsis on the other hand, these two examples show that the size of the ellipsis site is not the same in gapping and pseudogapping, with the ellipsis site in gapping encompassing the point at which negation appears in the syntactic hierarchy, and with the negation falling outside of the ellipsis site in pseudogapping (Gengel, 2007, 36).

This section has presented a brief discussion of pseudogapping. While most research on ellipsis is based on English, this is much more apparent for pseudogapping. Non-English examples of pseudogapping are few and far between. The next section includes a discussion of pseudogapping in Bantu, where it appears that pseudogapping is not attested in the two languages for which it has been studied. However, 5.2.2 provides evidence that pseudogapping is found in isiZulu.

5.2 Gapping in Bantu

5.2.1 Gapping in Other Bantu Languages

This section introduces the findings with regard to gapping in Bantu languages; as with the previous chapters, it serves to lead into my findings for isiZulu. Manus and Patin (to appear, 35) state that gapping and other types of clausal ellipsis have received very little attention in the literature on Bantu. Manus and Patin (to appear, 35) report that gapping and stripping can be found in Shingazidja, Símákonde and Swahili⁴⁶, and Ma (2017, 164) presents what appears to be a stripping construction from isiXhosa, although without identifying it as such. (38) is a Shingazidja example from Manus and Patin (to appear, 35). As in the English examples discussed at the beginning of this chapter, the verb (*hwanza*) has been gapped and a remnant (the object DP *yembe*) has been left behind. An unexpected feature of this example is that there is no conjunction joining the two conjuncts.

- (38) Djumwá hw-anza n-dróvi Saidí yembe. Shingazidja
 Juma SM15-like 10-banana Saidi 10.mango
 ‘Juma likes bananas, Saidi mangoes.’

⁴⁶ I present just the basic and most relevant examples here. See Manus and Patin (to appear) for a more nuanced discussion accompanied by further examples.

- (39) Júúma ankulóóta di-ndíisi Saíidi má-ngéela. Símákonde
 Juma SM1.PRE.want 10-banana Saidi 6-mango
 ‘Juma wants bananas, Saidi mangoes.’

In the Símákonde example from Manus and Patin (to appear, 35) in (39), the gapped verb is *ankulóóta* and the remnant is *mángéela*. For stripping, Manus and Patin, (to appear, 44) provide examples from Shingazidja and Swahili, two of which I repeat below in (40) and (41). In each of these examples, most of the second conjunct has been elided, with only the subject DP and a focus particle having survived.

- (40) Saidí ha-onehá harumwá e=juhulí Shingazidja
 Saidi SM1.PFV-see.PAS inside AUG10=10.party
 Djumwá βa=(h)é.
 Juma PRO16-POSS1
 ‘Saidi has been seen at the party, Juma too.’

- (41) Wa-tu w=engi wa-li-m-salimia Ali na Swahili
 2-person 2=many SM2-PST-OM1-greet.APL Ali and
 Amina pia.
 Amina too
 ‘Many people have greeted Ali, and Amina too.’

In her discussion of VP ellipsis in isiXhosa, Ma (2017, 163) looks at the constructions shown in (42).

- (42)a. ??U-John u-thand-a ama-Apile, naye u-Mary isiXhosa
 1a-John SM1a-like-FV 6-apple and 1a-Mary
~~u-thand-a ama-Apile.~~
 SM1a-like-FV 6-apple
 ‘John likes apples and Mary too.’

- b. ??U-John w-a-theng-a i-moto naye u-Mary isiXhosa
 1a-John SM1a-PST-buy-FV 9-car and 1a-Mary
~~w-a-theng-a i-moto.~~
 SM1a-PST-buy-FV 9-car
 ‘John bought a car and Mary too.’

Ma (2017, 164) notes that these two examples were found to be acceptable by only some of her informants. Ma (2017, 166) identifies this type of construction as a type of ellipsis, but she does not say which particular type it is; her focus with this construction is simply to show that it is not VP ellipsis. While Ma (2017, 166) leaves the question as to the exact nature of this type of ellipsis in isiXhosa open for future research, she does make one very telling observation about this construction’s distribution. VP-ellipsis in English (and verb-stranding VP ellipsis in other languages) is able to appear in co-ordination as well as in comparatives and subordinate clauses. The construction in (42) however, can only appear in co-ordination (Ma, 2017, 166). In (43), I present Ma’s (2017, 165) example which shows that this type of ellipsis is not possible inside a subordinate clause.

- (43) *U-John a-ka-yi-ty-i nkuku, kodwa isiXhosa
 1a-John NEG-SM1a-OM9-eat-NEG 9.chicken but
 u-Mary ~~u-yi-ty-a i-nkuku.~~
 1a-Mary SM1a-OM9-eat-FV 9-chicken
 Intended: ‘John does not eat chicken, but Mary does.’

From the discussion in 5.1.2.1, we know that gapping is restricted in exactly this manner, and as a type of gapping, stripping is too. In both (42)a and b, only the subject DP *uMary* and the focus particle *naye* are left in the second conjunct following ellipsis, which seems to be identical to the English stripping example in (31). As such, I would like to suggest that Ma’s examples in (42)a and b show stripping.

Contrary to data for other Bantu languages, pseudogapping does appear to be possible in isiZulu, although not for all speakers.

The gapping data for isiZulu is not entirely straightforward, as will shortly become clear. I will begin by discussing the gapping-like constructions which were most readily accepted by my informants. In (45) we see an example of what might be gapping in isiZulu. It lacks the co-ordinating conjunction that is typical of English examples, but it does mirror the surface structure of the Shingazidja and Símákonde examples in (42)a and b, which Manus and Patin (to appear) treated as bona fide examples of gapping. As with those examples, the verb in (45) (*uyeza*) has been gapped, leaving the subject (*uSarah*) and a remnant (*ngesonto elizayo*) behind.

- (45) U-John u-yeza kusasa, u-Sarah ~~u-yeza~~ isiZulu
 1a-John SM1a-come tomorrow 1a-Sarah SM1a-come
 ngesonto elizayo.
 next week
 ‘John arrives tomorrow, Sarah next week.’

(45) was rated as fully acceptable by three of my informants. What we would not expect to be grammatical are examples where the two clauses are joined by some sort of disjunctive element. As discussed in section 5.1.2.1, the restriction of gapping to co-ordination is one of the construction’s defining traits. However, as the next two examples show, generally my informants found constructions involving adjunct clauses to be acceptable.

- (46) U-Sam ku-fanele a-sebenze namhlanje kanti isiZulu
 1a-Sam SM15-must SM1a.SUBJ-work today whereas
 u-Sarah ~~ku-fanele~~ ~~a-sebenze~~ kusasa.
 1a-Sarah SM15-must SM1a.SUBJ-work tomorrow
 ‘Sam must finish his work today whereas Sarah tomorrow.’

In (46), the verb of the second conjunct, *asebenze*, and the auxiliary-like modal verb, *kufanele*, have been elided. The subject, *uSarah*, remains, along with the adverb, *kusasa*. This looks just like gapping, with *kusasa* as the remnant, but the sentences are joined by the word *kanti*, which means ‘whereas’. This means that ellipsis is taking place in an adjunct clause, which should not be gappable, but four of my informants gave (46) a perfect rating, with one rating it as merely acceptable, and the last feeling unsure. In (47) the picture is very similar.

- (47) I-ndoda i-cishe ya-bamba i-nyamazane kanti isiZulu
 9-man almost SM9-catch 9-buck whereas
 i-bhubesi ~~eishe~~ ~~la-bamba~~ i-dube.
 5-lion almost SM5-catch 5-zebra
 ‘The man almost caught the buck whereas the lion, the zebra.’

In (47), the verb and an auxiliary have been elided, the subject remains, and there is an object DP remnant in the form of *idube*. In this example, the two clauses are again joined by *kanti*, suggesting that this should not be gapping. (47) was rated as perfectly well formed by one of my informants and acceptable by four, with the last informant feeling unsure.

A further problem for analysing the examples in (46) and (47) as gapping, is that using co-ordination with these examples makes them less acceptable. (48) was not as well received as the previous two, being judged as acceptable by three of my informants, uncertain by two and poor by one. In this example the clauses are joined by *kodwa*, meaning ‘but’, which is a co-ordinating conjunction.

- (48) U-Thando u-funda i-ncwadi kodwa u-Andrew isiZulu
 1a-Thando SM1a-read 9-book but 1a-Andrew
~~u-funda~~ i-phepha.
 SM1a-read 5-paper
 ‘Thando reads a book but Andrew a paper.’

(49) is the counterpart of (46), where I have tried to include the co-ordinating conjunction *futhi*, meaning ‘and’. Two of my informants rated the example as poor and one as very poor.

- (49) *U-John u-yeza kusasa, futhi uSarah isiZulu
 1a-John SM1a-come tomorrow and 1a-Sarah
~~u-yeza~~ ngesonto elizayo.
 SM1a-come next week
 Intended: ‘John arrives tomorrow, and Sarah next week.’

Using *na-*, another co-ordinator, in place of *futhi* or *kodwa* does not work either, as shown in (50). This example is much worse than (48) and was rated as poor by two informants and very poor by one.

- (50) *U-Thando u-funda i-ncwadi no-Andrew isiZulu
 1a-Thando SM1a-read 9-book and.1a-Andrew
~~u-funda~~ i-phepha.
 SM1a-read 5-paper
 Intended: ‘Thando reads a book and Andrew a paper.’

The gapping-like construction in these examples is difficult to define. We have a construction that is very much like gapping, with the verb elided and a remnant escaping ellipsis. But at the same time, the construction exists in the adjunct clauses where gapping is supposed to be impossible, and furthermore, the construction does not work in all examples of co-ordination, which is exactly where it ‘should’ work. Perhaps what appear to be intrinsic characteristics of gapping from the perspective of English are actually factors which are subject to cross-linguistic variation. Comments by two of my informants suggest to me that *na-* is not compatible with the contrast between the two clauses and that it could only be used when the event in each clause was exactly the same (i.e. if Thando reads a book then Andrew must read a book too, and not a newspaper). Having shown, at least to some degree, what is and what is not possible in

isiZulu with regard to gapping, I leave the issue of the unusual pattern of co-ordination and disjunction for further research.

In contrast to the somewhat fuzzy picture for gapping, I have found examples of stripping in isiZulu that look exactly as we would expect them to. In (51), the antecedent clause is *uNolwazi uphule isitsha*. In the elliptical clause, only the subject *uThuli* and the focus particle *naye* remain, the verb *uphule* and the object *isitsha* have been elided.

- (51) U-Nolwazi u-phule isi-tsha no-Thuli isiZulu
 1a-Nolwazi SM1a-broke 7-dish and.1a-Thuli
~~u-phule~~ ~~isi-tsha~~ naye.
 SM1a-broke 7-dish too
 ‘Nolwazi broke a dish and Thuli also.’

This example was found to be perfectly acceptable by two of my informants. Another three rated it as good, and the sixth informant was unsure about it. The only observable difference between this example and the isiXhosa examples in (42) is the ordering of the subject and the word *naye*, however, Ma (2017, 163) notes that *naye* may also follow the subject in isiXhosa. (51) shows that stripping is attested in isiZulu.

In this stripping example, and some of the others, some of my informants noted that the construction is ambiguous. It could mean that Thuli also broke a plate, or it could mean that Nolwazi broke a plate and she broke Thuli as well, although the second reading is semantically slightly odd.⁴⁷

⁴⁷ Ma (2017, 164) also notes this ambiguity for her examples in (38)a and b. This ambiguity in stripping constructions is observable in English as well, but it seems to receive only very minor attention in the literature.

- (52) U-Sam u-thanda izi-cathulo zakhe no-George ~~u-thanda~~ isiZulu
 1a-Sam SM1a-likes 7-shoes his and.1a -George SM1a-likes
~~izi-cathulo zakhe~~ naye.
 7-shoes his too
 ‘Sam likes his shoes and George also.’

In this example, the verb *uthanda*, the object *izicathulo* and the possessive pronoun *zakhe* have been elided via stripping. Once again, only the subject and the word *naye* remain. (52) was well received by my informants. Three rated it as perfectly acceptable, two rated it as good, and one was unsure. However, two of the informants only accepted the reading where Sam likes his shoes and Sam likes George. They did not accept the reading where George likes his⁴⁸ shoes, and they indicated that they would have rated the construction as ungrammatical if they were forced to go with the other reading.

- (53) U-Andrew u-funda isi-Zulu no-Josh ~~u-funda~~ isiZulu
 1a-Andrew SM1a-learn 7-Zulu and.1a-Josh SM1a-learn
~~isi-Zulu~~ naye.
 7-Zulu too
 ‘Andrew learns Zulu and Josh also.’

(53) is the best example of stripping in terms of informant judgements, with three informants rating it as perfectly well formed and the other three rating it as good. The speaker judgements for each of the three stripping examples show that stripping is attested in isiZulu. In addition, my informants reported no issues with using *na-* for coordinating the two clauses in the stripping examples. This provides support for my conjecture that *na-* is not compatible with contrasting clauses.

Next, I turn to pseudogapping in isiZulu. The judgements for pseudogapping are somewhat more divided than for the gapping and stripping examples already discussed.

⁴⁸ My informants generally seemed to accept both the sloppy and the strict reading for the elided pronoun.

In (54), we see an example of pseudogapping in isiZulu. Just like the isiZulu VP-ellipsis examples, the ellipsis site is preceded by an auxiliary-like element (*cishe*). But in (54), the only elided element is the verb *labamba*. The object DP *idube* has survived as a remnant.

- (54) I-ndoda i-cishe ya-bamba i-nyamazane kodwa isiZulu
 9-man SM9-almost SM9-catch 9-buck but
 i-bhubesi cishe ~~la-bamba~~ i-dube.
 5-lion almost SM5-catch 5-zebra
 ‘The man almost catches the buck, but the lion almost catches the zebra.’

(54) received the most outright favourable judgements of the pseudogapping examples, with two of my informants rating it as perfectly well formed, two rating it as good, one rating it as poor and one rating it as very bad. (55) is the next best pseudogapping example. It received one very good rating, two good ratings, two unsure ratings and one poor rating. In (55), the ellipsis site is preceded by *akazange*, the verb *akashayeli* has been elided and the locative argument of the verb remains as a remnant. On a small side note, there is no overt subject in the second conjunct of (55), with *pro* acting as the subject and controlling agreement on the auxiliary and elided verb.

- (55) U-Nolwazi u-vakashela e-dolobhe-ini kodwa aka-zange isiZulu
 1a-Nolwazi SM1a-visit LOC-city-LOC but NEG.SM1a -never
~~aka-vakasheli~~ e-makhaya.
 NEG.SM1a-visit LOC-homestead
 ‘Nolwazi visited the city but not the homestead.’

The last pseudogapping construction which I investigated is shown in (56). (56) received one very good rating, two good ratings, two unsure ratings and one very bad rating from my informants, making it the worst rated pseudogapping construction by a very small margin. As with (55), *akazange* precedes the ellipsis site, the verb *akadli* has

been elided, and the object *amazambane* survives as a remnant. In addition, (56) is also a pro drop example.

- (56) U-James u-dle u-bhontshisi kodwa aka-zange isiZulu
 1a-James SM1a-ate 1a-beans but NEG.SM1a-never
~~a-dle~~ ama-zambane.
 NEG.SM1a-ate 6-potatoes
 ‘James ate beans but not potatoes.’

Though the speaker judgements for the pseudogapping examples are not as one-sided as I would have hoped, at least half of my informants found each example to be grammatical. The judgements for the pseudogapping constructions are not that different from those for the VP-ellipsis examples in 3.4.1. The best isiZulu VP-ellipsis examples were more widely accepted than the best isiZulu pseudogapping examples which I and my informants were able to construct, but the pseudogapping examples were still accepted by most of my informants.

5.2.3 Conclusion: Gapping in Bantu

Gapping is attested in many different languages, including Bantu languages such as Shingazidja and Swahili. The examples presented at the beginning of section 5.2.2 show that gapping (or at the very least something very similar to gapping) is attested in isiZulu as well. The uncertainty surrounding the status of gapping in isiZulu emerges from the fact that the gapping-like construction in isiZulu is not possible with certain forms of conjunction and that it can appear in disjunction as well. The stripping examples that were discussed next appeared to be much more like their English counterparts. Pseudogapping does appear to be possible in isiZulu, which is unexpected in the light of the discussion which appears in the literature on ellipsis in Bantu, but it is perhaps less surprising in the context of this thesis, given the findings for (English-like) VP-ellipsis in isiZulu in 3.4.1, where I have shown that English-like VP ellipsis is attested in isiZulu.

5.3 Conclusion

This chapter has examined gapping, the closely related phenomenon of stripping and the more tenuously connected construction called pseudogapping. After looking at the basic traits of gapping and the restraints on the form that gapping remnants can take, I looked at two conflicting analyses of gapping. In the first analysis, originally developed in Johnson (1994), gapping was defined as a construction produced by across-the-board movement and scrambling. In the second account, of which Hartmann (2000) is a prominent representative, gapping was treated as another type of ellipsis construction where PF deletion is responsible for removing the elided material. Stripping is usually treated as a type of gapping where there is no remnant and receives far less attention in the literature than standard gapping does. Pseudogapping was discussed next, with emphasis being placed on showing that while it bears some similarities to gapping, it is actually a type of VP-ellipsis. While gapping and stripping are reported to exist in many different languages, including some Bantu languages, pseudogapping has only been reported for a few languages other than English. One of the original contributions of this thesis is that it shows that gapping (or something very much like it), stripping and even pseudogapping are attested in isiZulu.

6 Conclusion

This thesis has examined VP-ellipsis (together with verb-stranding VP-ellipsis), sluicing and gapping (together with stripping and pseudogapping) in English and isiZulu. The investigation into English looked at how ellipsis in English is analysed in the literature and drew on Merchant (2001) and van Craenenbroeck and Merchant (2013) in particular.

In terms of different competing analyses of ellipsis, this thesis has focused on analyses that treat ellipsis as the deletion of linguistic material at PF. For VP-ellipsis and sluicing, the focus was on Merchant's (2001) [E] feature-based analysis. Under this analysis, the ellipsis site contains the same fully articulated syntax as a non-elliptical construction. However, the phonological content is deleted at PF when the correct focus conditions are met, with the focus conditions being imposed by a syntactic feature, [E]. Hartmann's (2000) analysis of gapping is similar. In her analysis, gapping is licensed under the correct focus conditions (though she does not tie this to a feature as Merchant (2001) does) and the ellipsis site contains fully articulated syntax whose phonological content is deleted at PF and therefore not pronounced. Evidence from syntactic and semantic mismatches between the ellipsis site and its antecedent in VP-ellipsis seems to suggest that the identity relation between the ellipsis site and the antecedent is semantic in nature (which Merchant's (2001) analysis captures using the semantics of focus and entailment), but the fact that a syntactic mismatch in the form of active-passive mismatches is ungrammatical in sluicing forces Merchant (2013) to acknowledge that there must be a syntactic aspect to identity as well. For VP-ellipsis, the older analysis of Lobeck (1995), where the ellipsis site is treated as a silent pronoun, was also considered but ultimately rejected in the face of agreement data and other similar examples that show that the ellipsis site does contain fully articulated structure. Similar evidence for the ellipsis site containing fully articulated structure came from sluicing in the form of case assignment and island violations which are not easy to account for if the ellipsis site is assumed to be truly empty.

For gapping, the alternative analysis of Johnson (2008b, a.o.), in which ellipsis is viewed as the result of ATB movement, was explored. However, the fact that Johnson's (2008b) analysis involves the violation of the Co-ordinate Structure Constraint and requires scrambling to be possible in languages where it is otherwise not attested makes Hartmann's (2000) analysis of gapping more attractive. Pseudogapping was shown to be a type of VP-ellipsis which shares some traits with gapping, rather than a type of gapping.

As mentioned throughout the discussion in each chapter of this thesis, the literature on ellipsis is heavily focused on English, although work on ellipsis in other languages does exist. One example of ellipsis outside of English has been identified in work on verb-stranding VP-ellipsis, to which I paid particularly close attention because Goldberg (2005) shows it is found in the Bantu languages Swahili and Ndendeule, amongst other languages such as Hebrew and Irish. If ellipsis has received less attention in other languages, it has received almost none in the Bantu languages. Bassong (2014) finds that sluicing is attested in Basàá, while Manus and Patin (to appear) find that sluicing, gapping and stripping are possible in Swahili, Símakonde and Shingazidja. Ma (2017) argues that English-like VP-ellipsis is not possible in isiXhosa, and she shows that verb-stranding VP-ellipsis is not possible either.

In my investigation of the aforementioned ellipsis constructions in isiZulu I made the following findings. The first, presented in chapter 3, is that isiZulu does have English-like VP ellipsis, which is unexpected, as this has not been reported for other Bantu languages. All of my examples of this type of ellipsis used the same deficient verb in both conjuncts, so an avenue for further research would be to see if the deficient verbs in each conjunct can be different, as is possible with auxiliaries in English VP-ellipsis. The next finding (also in chapter 3) is that verb-stranding VP-ellipsis is not possible in isiZulu. It is difficult to disentangle object drop from ellipsis in isiZulu, making it difficult to tell whether missing objects are null objects or have actually been elided. However, the fact that VP-internal adverbs and locative arguments are not recoverable in constructions that might involve ellipsis shows that verb-stranding VP-ellipsis is not attested in isiZulu. The unexpected examples involving the verb *ya* offer an avenue for

further research, as does the suggestion by Buell (2005) that ellipsis must be involved in examples where an unpronounced pronominal object would produce the wrong reading.

In chapter 4, sluicing was found to be possible in isiZulu, although my data only covers the sprouting subtype of sluicing. This is clearly a shortcoming which I hope to follow up on in future research. Another interesting prospect for future research would be to establish concretely that isiZulu sluicing involves cleft constructions.

Gapping (or something very similar) and stripping were also found to be possible in isiZulu in chapter 5. For gapping, two unexpected issues arise. The first is the restriction on which conjunction can be used. The second, and much more serious, issue is that these apparent gapping constructions can appear in disjunction as well as co-ordination, even though (according to the literature) gapping should be restricted to co-ordination. In stripping, my data was fairly straightforward. Pseudogapping was also found to be attested in isiZulu. On the one hand, this is a particularly interesting finding, as I am not aware that this has been shown to be possible in any other Bantu language, but on the other hand, it is less surprising given my finding that English-like VP-ellipsis is attested in isiZulu. A related issue that I do not believe has been addressed in the literature as yet (and is therefore another area for potential future research) is the possibility of pseudogapping occurring in languages which have verb-stranding VP-ellipsis.

A general issue with my investigation into ellipsis in isiZulu is that my data, in terms of the number of examples collected and judged for their grammaticality, could be more extensive. However, in spite of this shortcoming, I believe that my work on isiZulu has already yielded interesting and unexpected results which show that further investigation into ellipsis in languages other than English and especially in the Bantu languages is needed.

References

- Adams, N. (2010). *The Zulu ditransitive verb phrase*. PhD. thesis. University of Chicago.
- Aelbrecht, L. (2010). *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins.
- Aelbrecht, L. and Harwood, W. (2015). To be or not to be elided: VP ellipsis revisited. *Lingua*, 153. pp 66-97.
- Albert, C. (1993). *Sluicing and weak islands*. Unpublished manuscript. Santa Cruz: University of California.
- Baker, M. (1985). The mirror principle and morphosyntactic explanation. *Linguistic inquiry*, 16(3). pp 373-415.
- Bassong, P. R. (2014). *Information Structure and the Basa'a left peripheral syntax*. PhD. thesis. Yaounde, Cameroon: University of Yaounde.
- Buell, L. (2005). *Issues in Zulu verbal morphosyntax*. Ph.D. thesis. California: University of California, Los Angeles.
- Buell, L. (2011). *The Nguni augment from a syntactic perspective*. Handout: B4ntu 2011.
- Carnie, A. (2007). *Syntax: A generative introduction*. Oxford: Blackwell.
- Carstens, V. and Mletshe, L. (2015). Radical defectivity: Implications of Xhosa expletive constructions. *Linguistic inquiry*, 46(2). pp 187-242.
- Chao, W. (1987). *On ellipsis*. PhD. thesis. Amherst: University of Massachusetts.
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Chomsky, N. (1986). *Knowledge of language: Its nature, origin and use*. Westport, Connecticut and London: Praeger.
- Chomsky, N. (1981). *Lectures on government and binding*. Berlin, Germany: Mouton de Gruyter.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

- Chomsky, N. (2000). Minimalist inquiries: The framework. In Martin, R., Michaels, D., Uriagereka, J., and Keyser, S. J. (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Cambridge, MA: MIT Press. pp 89-155.
- Chomsky, N. (2001a). Beyond explanatory adequacy. *MIT Occasional Papers in Linguistics* (20). pp 1-28.
- Chomsky, N. (2001b). Derivation by phase. In Kenstowicz, M. (ed.), *Ken Hale: A life in language*. Cambridge, MA: MIT Press. pp 1-52.
- Chomsky, N. (2004). Beyond explanatory adequacy. In Belletti, A. (ed.), *Structures and beyond: The cartography of syntactic structures*. Oxford: Oxford University Press. pp 104-131.
- Chomsky, N. (2005). Three factors in language design. *Linguistic inquiry*, 36(1). pp 1-22.
- Chomsky, N. (2007). Approaching UG from below. In: Sauerland, U. and Gärtner, H. (eds.), *Interfaces + recursion = language? Chomsky's minimalism and the view from syntax-semantics*. Boston: Mouton De Gruyter. pp 1-30.
- Chomsky, N. (2008). On phases. In: Freidin, R., Otero, C. P. and Zubizarreta, M. L. (eds.), *Foundational issues in linguistic theory*. Essays in honor of Jean-Roger Vergnaud. Cambridge, MA: MIT Press. pp 133-166.
- Chomsky, N. (2013). Problems of projection. *Lingua*, 130. pp 33-49.
- Chung, S., Ladusaw, W. A. and McCloskey, J. (1995). Sluicing and logical form. *Natural language semantics*, 3(3). pp 239-282.
- Coppock, E. (2001). Gapping: In defense of deletion. In Andronis, M., Ball, C., Elston, H. and Neuvel, S. (eds.), *Proceedings of the Chicago linguistics society*, 37. Chicago: University of Chicago, Chicago Linguistic Society. pp 133-148.
- van Craenenbroeck, J. (2017). VP-ellipsis. In Everaert, M. and van Riemsdijk, H. (eds.), *The Blackwell companion to syntax*. 2nd edition. Hoboken: Wiley-Blackwell. pp 1-35.
- van Craenenbroeck, J. and Lipták, A. (2005). Ellipsis in Hungarian and the typology of sluicing. In Choi, K. and Yim, C. (eds.), *Ellipsis in minimalism: Proceedings of the 7th Seoul international conference on generative grammar*. Seoul: Hankook. pp 103-133.

- van Craenenbroeck, J. and Merchant, J. (2013). Ellipsis phenomena. In den Dikken, M. (ed.), *The Cambridge handbook of generative syntax*. Cambridge: Cambridge University Press. pp 701-745.
- Culicover, P. and Jackendoff, R. (2005). *Simpler syntax*. Oxford: Oxford University Press.
- den Dikken, M. (1995). *Particles: On the syntax of verb-particle, triadic, and causative constructions*. New York: Oxford University Press.
- Doke, C. (1973). *Textbook of Zulu grammar*. South Africa: Longman.
- Doron, E. (1990). *V-movement and VP-ellipsis*. Unpublished manuscript. The Hebrew University of Jerusalem: Department of English.
- Fiengo, R. and May, R. (1994). *Indices and identity*. Cambridge, MA: MIT Press.
- Fox, D. and Lasnik, H. (2003). Successive cyclic movement and island repair: The difference between sluicing and VP ellipsis. *Linguistic inquiry*, 34. pp 143-154.
- Gengel, K. (2007). *Focus and ellipsis: A generative analysis of pseudogapping and other elliptical structures*. PhD. thesis. University of Stuttgart.
- Goldberg, L. (2005). *Verb-stranding VP ellipsis: A cross-linguistic study*. PhD. thesis. Canada: McGill University.
- Gribanova, V. (2013). Verb-stranding verb phrase ellipsis and the structure of the Russian verbal complex. *Natural language & linguistic theory*, 31(1). pp 91-136.
- Guthrie, M. (1967). *Comparative Bantu: v. 1. The comparative linguistics of the Bantu languages*, 3. Farnborough: Gregg.
- Halpert, C. (2012). *Argument licensing and agreement in Zulu*. PhD. thesis. MIT
- Halpert, C. and Zeller, J. (2015). Right dislocation and raising-to-object in Zulu. *The linguistic review*, 32(3). pp 475-513.
- Hankamer, J. (1973). Unacceptable ambiguity. *Linguistic inquiry*, 4(1). pp 17-68.
- Hankamer, J. and Sag, I. (1976). Deep and surface anaphora. *Linguistic inquiry*, 7(3). pp 391-428.
- Hardt, D. (1999). Dynamic interpretation of verb phrase ellipsis. *Linguistics and philosophy*, 22(2). pp 187-221.

- Hartmann, K. (2000). *Right node raising and gapping: interface conditions on prosodic deletion*. Amsterdam: John Benjamins.
- Hoji, H. (1998). Null object and sloppy identity in Japanese. *Linguistic inquiry*, 29(1). pp 127-152.
- Huang, C. T. J. (1987). Verb-second in German and some AUX phenomena in Chinese. *Chinese-Western encounter: Festschrift for Franz Giet, SVD on his 85th birthday*. Taipei: Fu Jen University.
- Huang, C. T. J. (1988). Comments on Hasegawa's paper. In *Proceedings of Japanese syntax workshop: Issues on empty categories*. New London: Connecticut College. pp 77-93.
- isiZulu.net. (2018). *Zulu grammar cheat sheet*. <https://isizulu.net/grammar/> Accessed on 27 November 2018.
- Inoue, K. (1976). *Kenkei bunpoo to nihongo*. Tokyo: Taishukan.
- Johnson, K. (1994) *Bridging the gap*. Unpublished manuscript. Amherst: University of Massachusetts.
- Johnson, K. (2001). What VP ellipsis can do, and what it can't, but not why. In Baltin, M. and Collins, C. (eds.), *The handbook of contemporary syntactic theory*. Massachusetts: John Wiley & Sons. pp 439-479.
- Johnson, K. (2008a). Introduction. In Johnson, K. (ed.), *Topics in ellipsis*. New York: Cambridge University Press. pp 1-14.
- Johnson, K. (2008b). The view of QR from ellipsis. In Johnson, K. (ed.), *Topics in ellipsis*. New York: Cambridge University Press. pp 69-94.
- Johnson, K. (2009). Gapping is not (VP-) ellipsis. *Linguistic inquiry*, 40(2). pp 289-328.
- Johnson, K. (2014). *Gapping*. Unpublished manuscript. Amherst: University of Massachusetts.
- Kayne, R. S. (1994). *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Kim, J. (1997). *Syntactic focus movement and ellipsis: A minimalist approach*. PhD. thesis. Storrs: University of Connecticut.

- Lasnik, H. (1995). Case and expletives revisited: On greed and other human failings. *Linguistic inquiry*, 26. pp 615-633.
- Lasnik, H. (1999). On feature strength: Three minimalist approaches to overt movement. *Linguistic inquiry*, 30(2). pp 197-217.
- Levin, N. S. (1978). Some identity-of-sense deletions puzzle me. Do they you?. In Farkas, D., Jacobsen, W. and Todrys, K. (eds.), *Papers from the fourteenth regional meeting of the Chicago linguistic society*. Chicago, Ill: Chicago Linguistic Society, University of Chicago. pp 229-240.
- Lobeck, A. C. (1995). *Ellipsis: Functional heads, licensing, and identification*. Oxford: Oxford University Press.
- Ma, X. (2017). *Ellipsis in the vP domain in Mandarin and Xhosa*. PhD. thesis. Grahamstown: Rhodes University.
- Manetta, E. (2013). Copy theory in wh-in-situ languages: Sluicing in Hindi-Urdu. *Journal of South Asian linguistics*, 6. pp 3-24.
- Manus, S. and Patin, C. (2011). The prosodic structure of elliptical constructions in Bantu. *4th international conference on Bantu languages*.
- Manus, S. and Patin, C. (to appear). Ellipsis in Bantu G.40. To appear in van Craenenbroeck, J. and Temmerman, T. (eds.), *The Oxford Handbook of Ellipsis*. New York: Oxford University Press.
- Marten, L., Kula, N. C., and Thwala, N. (2007). Parameters of morphosyntactic variation in Bantu. *Transactions of the philological society*, 105(3). pp 253-338.
- Matu, P. M. (1991). *Wh-movement in Kiswahili*. MA thesis. Kenya: University of Nairobi.
- McCloskey, J. (1991). Clause structure, ellipsis and proper government in Irish. *Lingua*, 85(2-3). pp 259-302.
- Merchant, J. (2001). *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. New York: Oxford University Press.
- Merchant, J. (2003). *Remarks on stripping*. Unpublished manuscript. Chicago Ill: University of Chicago.
- Merchant, J. (2004). Fragments and ellipsis. *Linguistics and philosophy*, 27(6). pp 661-738.

- Merchant, J. (2008). Variable island repair under ellipsis. In K. Johnson (ed.), *Topics in ellipsis*. New York: Cambridge University Press. pp 132-153.
- Merchant, J. (2013). Voice and ellipsis. In *Linguistic inquiry*, 44(1). pp 77-108.
- Merchant, J. (2016). *Ellipsis: A survey of analytical approaches*. Unpublished manuscript. Chicago, Ill: University of Chicago.
- Ngonyani, D. S. (1996a). *The Morphosyntax of applicatives*. PhD. thesis. Los Angeles: UCLA.
- Ngonyani, D. S. (1996b). VP ellipsis in Ndendeule and Swahili applicatives. In Garrett, E and Lee, F (eds.), *Syntax at sunset: UCLA working papers in syntax and semantics, number 1*. UCLA: Department of linguistics. pp 109-128.
- Ngonyani, D. S. (1998). V-to-I movement in Kiswahili. In Beck, R. M., Geider, T. and Graebner, W. (eds.), *AAP Swahili Forum V, 55*. Cologne: Institut für Afrikanistic, Universität zu Köln. pp 129-144.
- Ngonyani, D. and Githinji, P. (2006). The asymmetric nature of Bantu applicative constructions. *Lingua*, 116(1). pp 31-63.
- Oku, S. (1998). LF copy analysis of Japanese null arguments. In Grube, M. C., Higgins, D., Olson, K. S. and Wysocki, T. (eds.), *Proceedings of CLS 34: part 1, The main session*. Chicago: University of Chicago, Chicago Linguistic Society. pp 299-314.
- Otani, K. and Whitman, J. (1991). V-raising and VP-ellipsis. *Linguistic inquiry*, 22. pp 345-358.
- Park, M. K. (1997). The syntax of VP ellipsis in Korean. *Language research* 33. pp 629-648.
- Pollock, J. Y. (1989). Verb movement, universal grammar, and the structure of IP. *Linguistic inquiry*, 20(3). pp 365-424.
- Potsdam, E. (1997). English verbal morphology and VP ellipsis. In Kusumoto, K. (ed.), *Proceedings of the North East linguistic society 27*. Amherst: University of Massachusetts, Graduate Linguistic Student Association. pp 353-368.
- Radford, A. (2004). *English syntax: An introduction*. Cambridge: Cambridge University Press.

- van Riemsdijk, H. C. (1978). *A case study in syntactic markedness: The binding nature of prepositional phrases*. Dordrecht: Foris.
- Ross, J. R. (1967). *Constraints on variables in syntax*. PhD. thesis. Cambridge, MA: MIT.
- Ross, J. R. (1969). Guess who? In Binnick, R. I., Davison, A., Green, G. M. and Morgan, J. L. (eds.), *Papers from the fifth regional meeting of the Chicago linguistic society*. Chicago: University of Chicago, Chicago Linguistic Society. pp 252-286.
- Rizzi, L. (1986). Null objects in Italian and the theory of pro. *Linguistic inquiry*, 17(3). pp 501-557.
- Sabel, J. and Zeller, J. (2006). Wh-question formation in Nguni. In Mugane, J., Hutchison, J. P. and Worman, D. A. (eds.), *Selected proceedings of the 35th annual conference on African linguistics*. Somerville: Cascadilla Proceedings Project. pp. 271-283.
- Schütze, C. T. (1996). *The empirical base of linguistics: Grammaticality judgements and linguistic methodology*. Chicago: University of Chicago Press.
- Schwarzschild, R. (1999). GIVENness, AvoidF and other constraints on the placement of accent. *Natural language semantics*, 7(2). pp 141-177.
- Smith, N. (2004). *Chomsky: Ideas and ideals*. Cambridge: Cambridge University Press.
- van der Spuy, A. (2017). A construction grammar account of Zulu singular/plural inflection. *Nordic journal of African studies*, 26(3). pp 191-214.
- Statistics South Africa (2012). *Census in brief*.
http://www.statssa.gov.za/census/census_2011/census_products/Census_2011_Census_in_brief.pdf. Accessed on 27 November 2018.
- Tancredi, C. D. (1992). *Deletion, deaccenting, and presupposition*. Ph.D. thesis. Cambridge, MA: MIT.
- Visser, M. (2008). Definiteness and specificity in the isiXhosa determiner phrase. *South African journal of African languages*, 28(1). pp 11-29.
- Voeltz, F.K.E. (2004). *Long and short verb forms in Zulu*. Unpublished manuscript. University of Cologne.
- Wurmbrand, S. (2017). Stripping and topless complements. *Linguistic inquiry*, 48(2). pp 341-366.

- Zeller, J. (1999). *Particle verbs, local domains, and a theory of lexical licensing*. Ph.D. thesis. Frankfurt: Johann-Wolfgang-Goethe-Universität zu Frankfurt am Main.
- Zeller, J. (2001). *Particle verbs and local domains*. Amsterdam: John Benjamins Publishing.
- Zeller, J. (2012) Object marking in isiZulu. *Southern African linguistics and applied language studies*, 30(2). pp 219-235.
- Zeller, J. (2015). Argument prominence and agreement: explaining an unexpected object asymmetry in Zulu. *Lingua* 156. pp 17-39.