NEGATIVE EVIDENCE IN LINGUISTICS:

THE CASE OF WAGIMAN COMPLEX PREDICATES

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1 Introduction

In this thesis I will justify the use of negative forms of evidence as a permissible means of analysing grammatical constructions. I do this by presenting a test case, a grammatical construction that is not entirely understood, and attempting to understand and explain further aspects of it by appealing to negative forms of evidence. The constructions that form the object of this investigation are complex predicates in the Wagiman language.

It will be necessary first, to provide a detailed explanation of Wagiman complex predicates; the elements that comprise them, the way those elements combine and the limitations that hold on them. Following that, negative evidence of the combinations that are possible and combinations that are impossible will provide the means by which to identify the constraints that limit complex predicates.

1.1 The Wagiman language

The Wagiman language is spoken by roughly eight individuals in the Top End of Australia's Northern Territory. Some of these individuals live in the cities of Darwin, the state capital, and Katherine, the inland capital. Others live in a small town close to Katherine called Pine Creek, though, most of the Wagiman people, both speakers of the language and their families, live in a community just a few minutes south of Pine Creek called Kybrook Farm.

The traditional lands that the Wagiman people once inhabited extends for hundreds of square kilometres from the Stuart Highway, the arterial route that connects most towns and cities in the Northern Territory, to the Daly River, one of the most biologically diverse riverine regions in Australia, and beyond.

The Wagiman language is distinguished from others in that it bears a class of word that is cross-linguistically rare. While Wagiman has verbs, they form a closed class. The number of meanings they express is limited and the meanings themselves are broad. Coverbs compensate for this in that there are many more coverbs than there are verbs, the meanings they express are highly specific and the range of meanings is wide. Coverbs express everyday concepts such as *binggork-ka* 'drink', *dabulp-pa* 'smoke' and *durdurt-ta* 'run'. They also express more specific concepts such as *gorrh-ma* '(catch) fish', *gayh-ma* 'sing out' and *murr-ma* 'wade through shallow water searching for something with your feet'. There are hundreds of coverbs in everyday use, but verbs are limited to a very small number of meanings; there are only 45.

Verbs are the part of speech that forms the syntactic head, the basis of a sentence. Without inflecting verbs, many sentences would not be meaningful. The solution that Wagiman

employs is to combine the expressive meaning of the coverbs and the syntactic properties of the verbs. These combinations are called complex predicates. The two elements combine at a fundamental, syntactic level; they form a unit of meaning, rather than two meanings being put together. As such, the syntactic and semantic mechanism by which the two elements are able to combine is of especial interest to theoretical linguistics.

In the first parts of this thesis, two theoretical models that have been proposed to account for predicates in Wagiman and predicates generally, are introduced. The first is the Wilson (1999) model of predicate fusion, which provides the mechanism by which coverbs and verbs are able to combine to form meaningful complex predicates. The second of these models is the Baker & Harvey (MS) model of predicate formation and proposes a set of universal constraints on monopredicational structures. Complex predicates in Wagiman are monopredicational structures and are therefore subject to these proposed constraints.

1.2 Research

Many of the examples used in this thesis derive from a collection of over thirty hours of recordings collected in the field over two separate field trips. The first was during November and December of 2005 and the second during July and August of 2006. In addition to these recordings, there exists a substantial corpus of recorded materials in Wagiman, collected by Stephen Wilson and Mark Harvey. My research questions were posited on the basis of these materials.

1.3 Negative evidence

The notion of 'evidence' in descriptive linguistics most often relates to positively attested, recorded sentences that represent natural speech. Negative forms of evidence, that is, information as to sentences that are ungrammatical, is only appealed to as a means of verifying claims. For instance, the claim that English verbs that are inflected with *-s* are predicated of a third person singular argument is an inference based on observation of examples from natural speech.

(1) The dog bites the man

This claim may be verified by appealing to negative evidence; by providing examples of ungrammatical sentences.

(2) *The dog bite the man

*The dogs bites the man

Claims and generalisations concerned with natural languages focus on positively derived evidence while negative evidence may serve in a more limited, supplementary role.

The question this thesis aims to answer in the affirmative is this: “Is it possible that negative evidence can serve a more sophisticated role in linguistics?” In other words, Can negative evidence be employed as a means of making empirical claims?

I will show that negative evidence can inform the linguist of certain grammatical information. To do this I will take as a test case the complex predicates of the Wagiman language of Far-Northern Australia. These constructions are constrained by both the syntactic mechanism by which two independent elements are combined, and by universal constraints on predicate formation. A complex predicate needs to satisfy both of these sets of conditions if it is to be well-formed and grammatical.

However, a complex predicate may satisfy the rules and conditions of syntactic combination but, at the same time, violate other constraints, such as the requirement that the sentence corresponds to all underlying information. These instances of complex predicates are, in binary terms, ungrammatical. Moreover, a complex predicate that does not satisfy the conditions on syntactic combination will similarly be ungrammatical.

The reason for the grammaticality in these two separate types differs. Those that violate constraints on lexical representation and correspondence are ungrammatical for one reason, while those that are unable to combine syntactically are ungrammatical for another. The difference between these two types of ungrammaticality is one of degree.

Negative evidence, I propose, may be employed to differentiate between these two types of ungrammaticality and thus serve as a means of testing the models that predict the permissibility of sentences. On one hand, complex predicates that are not able to combine syntactically elicit rejections when they are presented to speakers as constructed examples. On the other hand, complex predicates that may combine, yet in doing so violate less categorical constraints, are never produced. They are though, interpretable when constructed and presented to speakers. In short, there are degrees of ungrammaticality, two different types of which correspond entirely to two different types of negative evidence.

2 Wagiman grammar background

Before discussing the range of complex predicate constructions that occur in Wagiman, it is necessary to describe the morphological status and structure of their constituents. Coverb constructions involve two distinct parts of speech - verbs and coverbs. Verbs in Wagiman form a closed class and only 45 members have been recorded. Coverbs on the other hand, are an open class, with more than 500 currently attested members. The other main part of speech, the nominals, will not be discussed in detail as they are not relevant to the study of complex predicates. For a more detailed description of Wagiman grammar, including all parts of speech, the reader is directed toward either Cook (1987) or Wilson (1999).

2.1 Predicational parts of speech

In Wagiman, like many north Australian languages, there are two parts of speech, or word classes that are inherently predicational – verbs and coverbs. 'Inherently predicational' means those elements that *must* occur predicationally, such as verbs in English. While nominals may be predicational, such as 'man' in *I am a man*, they are not inherently predicational and may appear as substantive arguments - e.g. *the man is running*.

In English, while verbs, adjectives and prepositions are all argument-taking predicates, only verbs are able to act as the head of a finite clause. If any other part of speech in English constitutes the predicate in a finite clause, there must be a verb present to act syntactically as the head. In (3), the predicate is represented by the prepositional phrase 'in full swing'. However the clause is syntactically headed by an auxiliary verb 'be', albeit one that has become encliticised.

(3) Next door's in full swing

Wagiman verbs do very frequently function as independent predicates that act as the heads of finite clauses. However, the predicate meanings that can be so expressed are limited, there being only 45 members of the class. Coverbs on the other hand, while semantically diverse, cannot independently form finite clauses, unless verbalisation by conversion is employed (section 2.1.2.4). Apart from forming finite propositions by verbalisation, the only mechanism by which a coverb can act as a syntactic head in a finite clause is to combine with a verb. This combination is called a complex predicate and is discussed in detail in section 3.2.

2.1.1 Verbs

Verbs are the only class of word in Wagiman that must take inflectional morphology. Verbs can never appear as bare roots; either in sentences or when they are discussed metalinguistically. Coverbs can optionally inflect due to verbalisation, a process of zero-conversion by which they are able to behave as verbs. However they are clearly differentiated in that they are able to, and most often do, occur uninflected.

Most of the 45 members of the class of inflecting verbs convey broad, generic meanings. These include *yu-nginy* 'be', *ya-nggi* 'go', *ma-yi* 'get' and *bu-ni* 'hit'. In coverb constructions, they generally lack their full independent meanings - they function as light verbs (see section 3.2.1). They have little or no semantic content of their own and function mainly to head a finite clause. In that respect they are similar to the English clitic *'s* in (3). The verb *Yu-nginy* 'be' is the canonical member of this class; it often serves as the syntactic head of a clause with limited semantic contribution. As such, is it close in function to an auxiliary. The various uses of the verb *yu-nginy* 'be', including auxiliation, are discussed in 3.2.1.1.

There are also verbs that have more specific meanings. Verbs such as *da-yi* 'eat' and *nga-ndi* 'hear' are more specific in meaning than those discussed above. However, when combining with coverbs to form complex predicates, these verbs are restricted to coverbs of a similar meaning. An example of this is *nanda-yi* 'see' which may occur either independently, without a coverb, as in (4), or with coverbs whose meanings relate specifically to 'looking' as in (5).

(4) jamba ngi-nanda-yi
NEG 1plA.3sgO.PAST-see-PAST
'We couldn't see him' (Simplex Predicate; HL: AW_0020)

(5) lamarra-yi ga-nanda-n let-ta
dog-ERG 3sg-see-PRES look-ASP
'That dog is watching (everything)' (Complex predicate; HL: AW_0020)

While verbs such as *nanda-yi* 'see' combine with only a restricted range of coverbs, the converse is not true. Coverbs appearing with *nanda-yi* are not restricted to this verb. *Let-ta* 'look' for instance, may combine with a verb with broader meaning, as in (6)

(6) ngarudu ga-yu let-da
coil 3sg.PRES-be look-ASP
'That coiled (snake) is looking (at me)' (JH: AW_0014)

Other inflecting verbs express more specific meanings like *ngotjje-ji-na* 'be afraid (of)' and *gobe-na* 'tell lies'. These verbs have not so far been attested in complex predicate constructions in natural speech[1].

The final class of inflecting verb roots is extremely small with only two members. *Werriny-bu-ni* 'sing' and *lit-bu-ni* 'sew or mend' are compound verb roots that may represent the only surviving, though fossilised, members of a class of noun incorporates. The former bears a clear resemblance to the nominal *werrinyin* 'corroboree song' and the verb root *bu-ni* 'hit'. No processes of compounding or incorporation are productive in Wagiman, although there are a handful of compound coverbs. An example is *dagel-bitj-ja* 'salivate', the first part of which derives from a nominal *dagelin* 'spit/saliva'.

There are a number of words that have been omitted from the class of verbs because, while they often independently head finite clauses, they are clearly still coverbs. This small set includes *nyar-ma* 'be tired' and *nabey-ma* 'be hungry'. As discussed above, it is a criterion of class membership of verbs that the word obligatorily inflects; no verb can appear without inflection for tense, person and number. Although these words most often occur verbalised, as in (7), verbal inflection is not obligatory, provided an inflecting verb is present to act as the syntactic head, as in (8). They are therefore not classified as verbs.

(7) gi-nabey-ma-n-ngana naa
1pl.PRES-hungry-ASP-PRES-1pl now
'We are all hungry now' (LL: AW_0022)

(8) nabey-ma gi-ya-ngana
Hungry-ASP 1pl.PRES-go-1pl
'We are all hungry' (HL: AW_0020)

Again, these verbalised coverbs contain specific meanings and are unlikely to combine to form complex predicates. No freely produced examples of complex predicates involving a verbalised coverb combining with another coverb have been recorded[2], though a constructed example of one was interpretable[3]. However, as discussed in section 7.2, interpretability does not imply grammaticality.

[1] *Dippart-ta ga-ngotjje-ji-n* 'he's jumping scared' was interpretable but never produced.
[2] The corpus of data comprises over thirty hours of audio recordings and is supplemented by a number of texts.
[3] *bongorrk-ka ga-guk-ka-n*
snore-ASP 3sg-sleep-ASP-PRES
"He is asleep-snoring"

2.1.2 Coverbs

Most verbal predicates in Wagiman involve another part of speech, in addition to an inflected verb. Schultze-Berndt (2000) uses the term 'coverb' for this part of speech in Jaminjung and Wilson (1999) follows. Other labels for similar parts of speech include 'verb particle' (Merlan, 1994), 'verb' - with inflecting verbs labelled auxiliaries - (Tryon, 1974) and 'participle' (Cook, 1987). Another term that has been widely adopted for a similar part of speech in other Australian languages is 'preverb' (Nash, 1982). The term coverb will be used here.

Coverbs in Wagiman are an open class and so far number over five hundred, though clearly there are more; the inventory of recorded coverbs grows with continuing research. Wilson (1999:44-59) draws upon evidence from a range of sources to give weight to the claim that Wagiman coverbs are a part of speech independent of both nominals and verbs, the other lexical word classes. I provide a brief summary of Wilson's arguments in the sections that follow.

2.1.2.1 Phonology

While verb roots are all vowel-final, nearly all coverbs have a final consonant, which may be any segment from the Wagiman phonemic inventory. Further, coverb roots are different to all other word classes in that the glottal stop, which is phonemic in Wagiman, frequently occurs as a final segment. Orthographically, it is represented by 'h'.

2.1.2.2 The -ma suffix

The Wagiman coverbs are identified most easily by the presence of the suffix *-ma* or its allophonic variations. The *-ma* assimilates its consonant to a preceding nasal or stop (illustrated by (9) and (10)), but remains *-ma* following vowels and approximants (illustrated in (11)).

(9) *demdem-ma* 'be spotted'
jin-na 'stay a long time'
wirriny-nya 'turn around'
gelyeng-nga 'be raw'

(10) *dup-pa* 'be sitting'
bort-ta 'die'
datj-ja 'bloom/flower'
gidik-ka 'tickle'

(11) *jolo-ma* ‘to urinate’
morrol-ma ‘be ashamed’
murr-ma ‘wade through shallow water searching for something with your feet’
wordow-ma ‘turn over’
nabey-ma ‘be hungry’

As mentioned above, a common final segment for coverbs is a glottal stop. However this segment does not affect the allomorphy of the *-ma* suffix. The *-ma* suffix shows consistent allomophy unaffected by the presence of the glottal stop. Examples (12) and (13) illustrate this.

(12) *ding-nga* [dɪŋŋa] ‘look good’

(13) *bengh-nga* [bɛŋʔŋa] ‘poke’

Sentence (12) illustrates an instance of the *-ma* suffix assimilating in place to a preceding nasal while (13) shows that this occurs even when the suffix is separated from the root by a glottal stop. The glottal stop is a phonemic segment in Wagiman, as evidenced by the following minimal pair:

(14) *larr-ma* [larma] ‘have indigestion’

(15) *larrh-ma* [larʔma] ‘scrape’ or ‘be dry’

The coverb plus the *-ma* suffix is the form of the coverb that is unmarked for aspect. The absence of the *-ma* suffix marks perfect aspect.

The aspectually unmarked *-ma* form may take a further suffix *-yan*, producing a continuous reading. Coverbs with the *-yan* suffix may still appear with inflecting verbs, but the meaning they convey differs from complex predicates with the unmarked coverb. Not enough is known of this difference and *-yan* form coverbs generally. This thesis focuses on complex predicates formed using underived coverbs. The two suffixes together, *-ma-yan*, are clearly cognate with the Jaminjung *-mayan* continuous marker (Schultze-Berndt, 2000). For a fuller discussion of the suffix in Wagiman, see Wilson (1999:50).

There is also evidence that the *-ma* suffix is a part of speakers’ intuitive knowledge of the words. For instance, when coverbs are discussed in isolation, the *-ma* suffix is always present. The suffix is also present when the coverbs are verbalised, suggesting further that the

unmarked, basic form of the lexeme includes the suffix. As such, all metalinguistic references to coverbs here include the *-ma* suffix.

2.1.2.3 Semantics

As discussed above in section 2.1.1, Wagiman only has 45 verbs. Many of these are broad, generic meanings like *yu-nginy* 'be' and *ya-nggi* 'go'. Coverbs are differentiated from verbs in that the individual meanings they express are usually much narrower. Coverbs that are typical in this respect are exemplified in (16).

(16) *lerdongh-nga* 'play (a didgeridoo)'

bert-ta 'blame'

murr-ma 'wade through shallow water searching for something with your feet'

2.1.2.4 Morphology

Coverbs are distinguished morphologically from verbs in that verbs must take inflectional morphology while coverbs may optionally take inflectional morphology, that is, when they have undergone verbalisation by conversion. Otherwise, coverbs occur frequently as underived stems. Verbs may never occur without inflectional morphology.

Similarly, coverbs can be distinguished from nominals in that only nominals can take grammatical case. Both ergative and absolutive comprise grammatical case, yet as the absolutive-marked forms are marked by a zero-morpheme, they are indistinguishable from forms that have no case-marking. The overt ergative marker *-yi* is therefore used to differentiate between words that may take grammatical case such as nominals, and words that may not, such as coverbs.

(17) yarrulan-yi ngan-bu-ni
young man-ERG 3sgA.1sgO-hit-PAST
"the young man hit me"

(18) *duh-ma-yi ngan-bu-ni
push-ASP-ERG 3sgA.1sgO-hit-PAST
*"The pusher hit me"

Coverbs are however, allowed to take semantic case such as the dative/purposive *-gu*, as in the coverb *let-ta* 'look' in (19).

(19) Bewort-ta ngi-bu-ni modaga, let-ta-gu mamin
look over-ASP 1plA.3sgO.PAST-hit-PAST car look-ASP-DAT white man
'We had to look over that car, to see the white man' (HL: AW_0020)

Another aspect of the morphology of coverbs that demarcates them from the other parts of speech is verbalisation. When Wagiman coverbs take verbal inflections, they are able to act as the syntactic head of a clause. This process appears to be fully productive, as evidenced by the fact that Kriol borrowings verbalise as frequently as other coverbs. *Laikki-ma* 'like' is derived from the Kriol *laigim* and *bort-ta* 'die' is a coverb that occurs frequently in different forms. Each verbalise frequently as shown below:

(20) Mahan maminakbun, nga-laikki-ma-n gahan danganyin
Good very good 1sg-like-ASP-PRES that tucker
"This is very good, I like that tucker" (PH: texts.2)

(21) ba-bort-ta-yi naa
3pl.PAST-die-PAST now
"They are all dead now" (LM: texts.1)

In verbalised form, the entire coverb, including the *-ma* suffix, is treated as the verb root to which the regular actor-patient prefixes and the tense and aspect suffixes are attached. There is no affix that serves as a 'verbaliser'[4], thus, the process is one of conversion. Verbalisation, while productive, only occurs in practice with a small number of coverbs. In other words, all coverbs *may* verbalise but only a small group of them are commonly attested in natural speech. This group includes *bort-ta* 'kill', *guk-ka* 'sleep', *nabey-ma* 'be hungry', *nyar-ma* 'be tired' and the Kriol borrowing *laikki-ma* 'like' as in (20).

2.1.2.5 Verbalisation and coverb class

The verbalised coverbs are relevant to the investigation of event structures in that they provide the means through which the arguments and semantics of coverbs can be investigated independently of verbs. That is, without the confounding factors relating to complex predicate formation. Verbalisation aids the classification of coverbs into subclasses – e.g., coverbs that denote simple states and coverbs that denote changes of state.

[4] Wilson (1999) analyses the *-ma* suffix and its allomorphs as a 'verbaliser' when a coverb is verbalised but as 'aspect' when it is underived. There is no strong evidence to support of refute either analysis.

This can be demonstrated with an example of a verbalised inchoative coverb such as *bort-ta* ‘die’ contrasted with a verbalised stative coverb like *guk-ka* ‘sleep’.

(22) ga-bort-ta-n
3pl.PRES-die-PRES
“He is dying” (LM: texts.1)

(23) gaba-guk-ka-n-guju
3pl-sleep-ASP-PRES-PL
“They are sleeping” (LM: texts.1)

Each is inflected for the present tense but the verbalised state in (23) has a different event structure to that of (22). While the resultant state ‘dead’ is still an inherent part of the change of state coverb *bort-ta* ‘die’, it is not realised. In a stative coverb however, there is no change taking place over time. It is static. Verbalisation can therefore be used as a criterion for differentiating coverbs that have various event structures into subclasses.

3 Syntactic functions of coverbs

Wagiman coverbs are used in a variety of constructions. The unmarked coverb may occur as an adjunct or as the co-head of an entire clause, jointly acting as the head with the inflecting verb.

(24) bewh-ma ga-bu-n boran, liri-ma, gahan lamarra
cross-ASP 3sg-hit-PRES river swim-ASP that dog
"That dog is crossing the river, swimming" (JH: AW_0018)

The sentence above contains an example of each. The first coverb, *bewh-ma* 'cross' is an example of a coverb that acts as the co-head of the clause. It is combined with the verb *bu-ni* 'hit' to form the complex predicate *bewh-ma bu-ni* 'cross'. The second coverb, *liri-ma* 'swim' is functioning as a sentential adjunct. It is not acting as a syntactic head and is instead contributing the information it contains in a compositional manner.

Complex predicates such as *bewh-ma bu-ni* 'cross' represent the overwhelming majority of Wagiman clauses. Wilson cites the figure that 4 out of every 5 clauses in Wagiman contain a complex predicate (Wilson, 1999:68).

The verb-coverb configuration allows coverbs as adjuncts. That is, a verb followed by a coverb is not restricted to complex predicates in the same way as coverb followed by verb. Otherwise, if a coverb is not contiguous with the verb, then it is taken to not be a complex predicate, though it may act as an adjunct modifying the entire clause.

(25) Ngi-ga-ndi-guju magu wurnhwurn-na
1plA.3sgO-take-PAST-DUAL yonder carry on back-RDP-ASP
'We took it that way, on our backs' (LM: tx 18)

The coverb in (25) *wurnhwurn-na* 'carry something on one's back' does not form a complex predicate with the verb *ga-ndi* 'take'. Rather, it is functioning as an adjunct attached at the S-node, thereby modifying the entire clause. Complex predicates consist of coverb followed by verb or otherwise, verb followed by coverb. This is discussed in more detail in section 3.2.3.

Complex predicates are introduced in section 3.1 with regards to cross-linguistic research in recent years. Section 3.2 will then discuss the coverb constructions of Wagiman and will summarise the evidence that indicates that they are complex predicates.

3.1 Complex Predicates

In recent years there has been extensive research on complex predicates in various languages from a number of language families and from a range of theoretical syntactic models. There is considerable variation among the terminology. The term 'complex predicate' has been used in reference to many constructions that, under the definition adopted here, do not qualify as such. Conversely, constructions in various languages that should be called 'complex predicates' are instead identified using other terms. As such, it is difficult to compare analyses of complex predicates.

Butt's (2003:2) definition, given below, is the definition adopted here:

(26) The term complex predicate is used to designate a construction that involves two or more predicational elements (such as nouns, verbs and adjectives) which predicate as a single element, i.e., their arguments map onto a monoclausal syntactic structure

That is, complex predicates are complex in the sense that they are formed by the combination of independent elements. At the same time they are taken to be unitary in that they functionally operate as single predicates; they have a single argument structure. This definition encapsulates three key features of complex predicates:

(27) They have monoclausal syntactic structures
They are composed of more than one constituent
Each constituent contributes to a part of the predicate

The second of these may be demonstrated with ease. A complex predicate consists of two separate constituents; a coverb and a verb. The other two require more evidence. Coverb constructions in Wagiman will be shown in section 3.2 to conform to the definitional criteria described by Butt (2003) and cited above in (26). That is, they will be shown to be monoclausal and formed by more than one constituent, each of which contributes to the overall predicate. In short, coverb constructions in Wagiman present a clear example of complex predicates.

3.2 Complex predicates in Wagiman

As discussed in the previous chapter, Wagiman contains two inherently predicative parts of speech. They are coverbs and verbs. The verbs are a restricted class of 45. Coverbs, while able to express a more varied range of meanings, are not able to independently head finite clauses. In order to express most predicate meanings, it is necessary to combine a coverb with

verb. The following two examples contrast a simplex predicate, a verb *da-yi* ‘eat’ (28), with a complex predicate in (29).

(28) ngagun-yi nga-da-yi danganyin
1sg-ERG 1sgA.3sgO-eat-PAST tucker
‘I ate tucker’ (LL: AW_0028)

(29) jakkarljakkarl-ma ga-da lamang, warren gahan
eat noisily-ASP 3sgA.3sgO.PRES-eat meat child that
‘That child is eating meat noisily’ (LL: AW_0024)

The propositional meaning is similar between these two examples. They both denote the event of eating. However the second example includes a coverb *jakkarljakkarl-ma* ‘eat noisily’ that takes a broad meaning such as ‘eat’ and makes it more specific.

3.2.1 Semantic bleaching and light verbs

The term ‘light verb’ is attributed to Jespersen (1965) though it has been more recently used in reference to complex predicates by Butt (2003). The term ‘light verb’ refers to a verb that loses some of its semantic content such that it no longer predicates fully. For example, the inflecting verb *bu-ni* ‘hit’ can occur as an independent verb as in (30):

(30) Lamarra gahan ba-bu-ni
dog that 3plA.3sgO.PAST-hit-PAST
‘That dog got hit’ (lit. they hit/killed that dog) (LL: AW_0021)

However when combined with a coverb in a complex predicate, *bu-ni* ‘hit’ loses the portion of the semantics that conveys the imparting of force associated with ‘hit’. The example below demonstrates this:

(31) Bewort-ta ngi-bu-ni modaga
look.over-ASP 1plA.3sgO.PAST-hit-PAST car
‘We looked over the car’ (HL: AW_0020)

The event of ‘looking over’ involves no actual hitting. The verb has lost this component of its predicate and now serves only as an auxiliary conveying transitivity and aspect. The verb *bu-ni* ‘hit’ has become light. However, complete semantic bleaching does not occur with all verbs when they form complex predicates. Sentence (32) demonstrates a complex in which the verb is not bleached.

(32) Gajirri gahan ga-di-n wilh-ma magu
Girl that 3sg.PRES-come-PRES walk-ASP yonder
'That girl over there is walking here' (LL: AW_0021)

The inherent directional component in the verb *di-nya* 'come' is retained when this verb combines with coverbs to form complex predicates. Predicates containing this verb can only be used to refer to motion towards the deictic centre. Semantic bleaching does not therefore affect all verbs uniformly.

Butt takes the presence of a light verb to signal the presence of a complex predicate (Butt, 2003:3). If this analysis is correct then examples showing the reduced semantic content of verbs, showing clear cases of light verbs, are sufficient to prove that the coverb constructions of Wagiman are complex predicates.

However, it must also be pointed out that the reverse of the logical relation, that all complex predicates contain light verbs, is not the case. Some complex predicates, such as (32), combine verbs with coverbs where no semantic bleaching is necessary. All meaning contained in the argument structure of the full verb is contained in the argument structure of the complex predicate.

3.2.1.1 Grammaticalisation of inflecting verbs

The verbs *yu-nginy*, *ni-nginy* and *da-nginy* comprise a subset of Wagiman verbs that historically denoted stance. They were translated as 'lie', 'sit' and 'stand' respectively but have since undergone partial grammaticalisation. *Yu-nginy* is now one of the most common verb roots and is used frequently in constructing complex predicates. *Ni-nginy* is considered an idiolectal variant. Individual speakers do still use both these verbs but show a clear preference for *yu-nginy*. There is no pattern as to the occurrence of *ni-nginy* as opposed to *yu-nginy* and there is no difference in meaning, they are idiolectal. *Da-nginy* 'stand' has fallen out of regular use to such a degree that I have never heard it in natural speech.

Yu-nginy and *ni-nginy* are now used as light verbs in complex predicates and quite interchangeably. *Yu-nginy*, moreover, is used as a copular verb in non-present tense sentences. Present tense sentences however, do not take a copula.

(33) lamarra gahan maman
dog that good
"That dog is good (to us)" (HL: AW_0020)

(34) Gelyeng-nga yu-nginy gahan lamang
Be raw-asp 3sg.PAST-be-PAST that meat
"That meat stayed raw" (LM: Texts.1)

That is, *yu-nginy* 'be' can be interpreted now as behaving as an auxiliary. The presence of it in sentence (34), contrasted with its absence in (33) indicates that it has the function of denoting tense. Since there is no discernable meaning difference between the two that pertains to the absence or presence of the verb, *yu-nginy* 'be' is often an auxiliary.

Evidence arises in section 5.2.1.1 that indicates that this cline of grammaticalisation, from stance verbs to light verbs and then to auxiliaries, also affects the stative verbs in complex predicates as opposed to simplex predicates such as in (33).

3.2.2 Monoclausality

The evidence from clause scrambling (Wilson, 1999:66-68) indicates that a complex predicate heads a single clause, rather than a main clause headed by a verb and a subordinate clause headed by a non-finite coverb. While word order in Wagiman is free, clauses cannot be scrambled together. Constituents within a clause must be contiguous, as in the following sentence which consists of two clauses:

(35) nganba-ga-ndi lah-laying dul-ma nga-ni-nginy
3plA.1sgO-take-PAST camp-ALL lie-ASP 1sg-be-PAST
'They took me back to the camp where I lay down' (Wilson, 1999:66)

Since word order within each clause is free, this sentence could equally occur in the configurations in (36) or (37) since the two clauses remain contiguous (clauses are bracketed). Scrambling two clauses together, as in (38) is not permitted (Wilson, 1999:66-67):

(36) [Lah-laying nganba-ga-ndi] [dul-ma nga-ni-nginy]

(37) [Nganba-ga-ndi lah-laying] [nga-ni-nginy dul-ma]

(38) *Nga-ni-nginy nganba-ga-ndi dul-ma lah-laying

The verb in (38) *nganba-ga-ndi* 'they took me' separates the elements that form the clause 'I lay down'. Similarly, the coverb *dul-ma* separates the two words that form the clause 'they took me to camp'. The ungrammaticality of (38) indicates that *dul-ma nga-ni-nginy* 'I lay down' is considered a unitary constituent. A clearer example is provided below:

(39) nganing-gin ngal-warlang-yi getj-ja ngan-ge-na garradin-gu
1sg-gen wife-ERG ask-ASP 3sgA.1sgO-put-PAST money-DAT
'My wife asked me for money' (PH: 5) (Wilson, 1999:66)

Garradin-gu 'for money' is an argument of *getj-ja* 'ask'; in this respect they are part of the same clause, yet they are separated. The fact that the coverb *getj-ja* 'ask' and its argument *garradin-gu* 'for money' are not contiguous here indicates that they are in the same clause as the constituent between them; the verb. The coverb and the verb must form a single clause; otherwise the verb's presence would violate the clausal contiguity condition.

3.2.3 Preferred word order

As discussed above, word order in Wagiman is free or, more accurately, pragmatically determined. The most frequent word order for the constituents that make up a complex predicate is coverb followed by verb. As Wilson points out (1999:68), 'this word order occurs about four fifths of the time'. Where the coverb does not directly precede the verb however, it must directly follow it and occur in the same intonational phrase if it forms part of a complex predicate with that verb. This configuration tends to be more common with complex predicates involving semantically bleached verbs such as *ya-nggi* 'go' and *yu-nginy* 'be', though it is not restricted to them. (41) is an example with *di-nya* 'come'.

(40) Ga-yu dabulp-pa bakka gahan lagiban
3sg.PRES-be smoke-ASP tobacco that man
"He's smoking tobacco, that bloke" (JH: AW_0023)

(41) Gajirri gahan ga-di-n wilh-ma magu
Girl that 3sg.PRES-come-PRES walk-ASP yonder
'That girl over there is walking here' (LL: AW_0021)

It is also the case that the configuration consisting of coverb followed by verb *necessitates* that it is a complex predicate. That is, if a coverb is operating as an adjunct rather than a co-head, then it must be either post-verbal or separated by an intonational phrase boundary. In sum, the coverb-verb configuration is taken to always be a complex predicate, while the reverse order can be interpreted either as a complex predicate or as a sequence consisting of a verbal head and an adjunct.

3.2.4 Summary

The preceding evidence indicates that the coverb-verb combinations in Wagiman are monoclausal, that their overall predicates are determined jointly by both the coverb and the verb and that the entire structure functions as a singular syntactic unit. They therefore fall within Butt's (2003) definition of complex predicates given above in (26). Two issues arise in relation to complex predicates. One is to explain the mechanisms through which the grammar is able to combine independent predicates together to form single complex predicates. The second lies in explaining the circumstances under which the combining of predicates is not possible. The first of these is addressed by S. Wilson (1999), whose explanation of complex predicate formation is summarised below in section 4.1. The second issue has been addressed by Baker & Harvey (MS), whose model of the constraints operating on predicate formation may serve to predict the range of meanings that are expressed by complex predicates. Chapter 5 tests the claims and predictions of these models and in doing so appeals to forms of negative evidence such as rejection of constructed examples.

4 Theoretical background

A number of models have been proposed in recent years to account for the issues that arise from complex predication. These include Alsina (1996), Butt (1995) and Mohanan (1994) all of which are within the framework of Lexical-Functional Grammar (LFG). Wilson (1999) develops a model of predicate fusion based on these models. This model explains the mechanism by which predicates merge to form complex predicates, but does not constrain complex predicate formation. As such, it does not explain why some coverb-verb combinations do not occur. The Baker & Harvey model (MS) proposes linguistic constraints that restrict the formation of complex predicates. Integrating the model of predicate fusion and the constraints proposed by Baker & Harvey (MS) provides a means of identifying which coverb constructions are impossible.

4.1 Predicate fusion

Predicate fusion is proposed as a means of allowing predicates to unify, which, in classical Lexical-Functional Grammar (Bresnan, 1982), is strictly disallowed. Classical LFG forbids an f-structure, the representation of the grammatical functions and features of a clause, including the head of a clause, from containing more than one PRED (predicate) value for any given attribute (such as the head of a clause). Since complex predicates involve the combination of multiple predicate elements acting as the head of the clause, they pose a problem.

The following two examples combine the same coverb *guk-ka* ‘sleep’ with two different verbs. The difference in meaning between them is clear:

(42) Ga-yu guk-ka gahan labingan
3sg.PRES-be sleep-ASP that baby
‘That baby is asleep’ (LM: 2)

(43) Guk-ka nge-ge-na gahan warri-buga?
Sleep-ASP 2sg-put-PAST that child-PL
‘Did you put those kids to sleep?’ (LM: H p. 283)

These two examples illustrate the central problem that complex predicates pose, namely, that a coverb such as *guk-ka* ‘sleep’ is able to occur in two clauses with different argument structures. The first example is an intransitive clause in which the complex predicate ‘be asleep’ has one argument ‘that baby’. In the second however, the complex predicate ‘put to sleep’ has two arguments; an agent ‘you’ and a patient ‘the kids’. ‘Put’ is a trivalent verb; it has an agent, a theme and a locative argument, yet the complex predicate that contains *ge-na*

'put' has only two arguments; an agent and a theme. While the property *asleep* can be construed as a metaphoric location, syntactically it is not operating as a location as it does not take the appropriate case.

Wilson proposes (1999:129) that the formation of complex predicates in Wagiman involves predicate fusion, whereby the argument structures of the independent elements are joined at the level of f-structure within the LFG framework. As such, he departs from previous models of predicate unification that take unification of predicates to occur at a separate level of syntax called A(gument)-structure. Wilson represents arguments and predicates in the same place; the LCS attribute - previously called PRED - of f-structure (Wilson, 1999:130). By being unified at this level of syntax, the predicate of a complex predicate can be treated as syntactically unitary.

4.1.1 Lexical-conceptual structures

The formalism of the 'fusion' analysis is based on Jackendovian lexical semantics. For example, the predicate expressed by the verb 'put', in the basic sense such as *I put the book on the table*, can be rewritten in terms of basic 'entities' or 'arguments', such as Events, Things and Paths, as well as basic 'functions', like CAUSE, BECOME and GO. The English verb 'put' can be represented using lexical conceptual structure as follows:

(44) Put

$[_{\text{Event}}\ \text{CAUSE}\ ([_{\text{Thing}}], [_{\text{Event}}\ \text{BECOME}\ ([_{\text{Event}}\ \text{BE}\ ([_{\text{Thing}}], [_{\text{Place}}])])])]$

To represent this conceptual structure in English, it means that 'something causes something else to become to be at some place'. The entities are named by the subscript labels and the semantic primitive functions are in capitals. Wilson takes these lexical-conceptual structures (LCS) not to be 'psychologically real' but instead simplistic representations of the more complex sub-events required for a verb to have the meaning it does (Wilson, 1999:131). Moreover, these abstract representations of meaning are not intended as an attempt at complete representation in semantic primitives. In fact in most cases the LCS leaves a great deal of meaning unanalysed. Resultant states, for example, are generally not analysed any further. The next example demonstrates this:

(45) Asleep

$[_{\text{Event}}\ \text{BE}\ ([_{\text{Thing}}], [\text{AT}_{\text{id}}\ ([\textit{asleep}])])]$

The English adjective *asleep* is only deconstructed semantically inasmuch as the basic operators are concerned. The LCS is being used as a tool to analyse the underlying event structures and argument structures of predicates, not as a means of decomposing all meaning. In other contexts there may be benefit in decomposing *asleep* into 'be living and can not do, see, or hear anything now and can do so later' or some such variant, but it is not relevant to the formation of complex predicates.

4.1.2 From PRED to LCS

Predicates in Wagiman can be analysed as lexical-conceptual structures. The argument structures of verbs can be directly investigated by looking at simple clauses headed by an independent verb. For instance, *ge-na* 'put' can occur as an independent predicate, functioning as the syntactic head of a clause, as in the example:

(46) nga-ge-na ngurrun-laying
1sgA.3sgO-put-PAST sun-LOC
'I put (the clothes) in the sun (to dry)' (LL: AW_0022)

This clause involves an agent (who causes the event), a theme (the object that moves) and a location (where the object is placed). Based on such occurrences of this verb independently acting as the main head of a clause, the lexical-conceptual structure of *ge-na* 'put' can be represented as:

(47) *ge-na* 'put (verb)'
[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$], [$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$], [$_{\text{Place}}$])])])]

All predicates in Wagiman, whether they are encoded as coverbs, verbs or as complex predicates, can be represented in this semantic formalism. The coverb *guk-ka* 'be asleep' for instance, is represented by an LCS as shown in (48).

(48) *guk-ka* 'sleep *(cv)*' [$_{\text{Event}}$ BE ([$_{\text{Thing}}$], [$_{\text{Property}}$ ([*asleep*])])]

Moreover, the complex predicate that combines these two, *guk-ka ge-na* 'put to sleep' is represented in terms of an LCS as in (49).

(49) *guk-ka ge-na* 'put to sleep *(cp)*'
[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$], [$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$], [$_{\text{Property}}$ ([*asleep*])])])])]

Explaining the mechanism by which the lexical-conceptual structures in (47) and (48) combine to produce the LCS in (49) will be the focus of the next section.

4.2 Fusion

Wilson (1999) introduced the concept of predicate fusion to account for the combination of Wagiman coverbs and verbs to form complex predicates. The previous models of Mohanan (1995), Butt (1995) and Alsina (1996) could not account for the apparent loss of information that Wagiman complex predicates entailed. Wilson (1999) takes these models and on the basis of them, develops the process of fusion. Presented below is an account of the mechanics of fusion as well as some improvements to account for irregularities.

4.2.1 LCS deletion

Predicate fusion by LCS deletion is understood to entail the deletion of part of the LCS of the inflecting verb and replacing it with the entire LCS of the coverb. The highest (e.g. left-most) predicate function in the LCS of the coverb must also be present in the LCS of the verb and all other predicate functions must correspond. So, if a coverb that contains become and be is to merge with any verb, the verb must have *at least* BECOME and BE, but may have higher predicate functions as well.

4.2.2 Corresponding predicate functions

Below, (50) represents a stative coverb merging into an inchoative verb. The template in (51) represents a stative coverb merging into a caused change of state verb. Similarly for (52) and (53), which represent an inchoative coverb merging into an inchoative and a caused change of state verb respectively.

(50)

Coverb			BE
			↓
Verb		BECOME	BE

(51)

Coverb			BE
			↓
Verb	CAUSE	BECOME	BE

(52) Coverb BECOME BE
↓ ↓
Verb BECOME BE

(53) Coverb BECOME BE
↓ ↓
Verb CAUSE BECOME BE

If the verb does not contain the predicate function that is the highest predicate function in the LCS of the coverb, fusion by deletion is unable to occur. In the template below that illustrates this, the star represents an impossible merger. The LCS of the verb does not contain the highest function that the LCS of the coverb contains. Fusion in this case is impossible.

(54) Coverb BECOME BE
↓ ↓
Verb * BE

In (55), BECOME is the highest predicate function in the LCS the coverb *bort-ta* 'die'. As the verb *yu-nginy* 'be' does not contain a BECOME function, predicate fusion does not occur; the elements are unable to merge to form a complex predicate.

(55) *bort-ta* 'die *(cv)*' [Event BECOME ([Event BE ([Thing], [*dead*])])]

yu-nginy 'be *(v)*' [Event BE ([Thing], [Place])]

Where both LCSs do have the highest function of the coverb in common, it represents the position in the LCS of the verb at which fusion begins. All the remaining LCS of the verb is deleted and replaced with the entire LCS of the coverb. The combination of *gu-ka* 'sleep' with *ge-na* 'put' can thus be represented as the deletion of the LCS of *ge-na* 'put' from the occurrence of the BE function onwards. This is replaced by the LCS of the coverb *guk-ka* 'sleep' and correctly produces the LCS of the complex predicate *guk-ka ge-na* 'put to sleep'. This example instantiates the template in (51).

(56) *guk-ka* 'be asleep *(cv)*' [Event BE ([Thing], [*asleep*])]
↓ ↓

ge-na 'put *(v)*'
[Event CAUSE ([Thing], [Event BECOME ~~([Event BE ([Thing], [Place])])~~])]

guk-ka ge-na 'put to sleep *(cp)*'

[Event CAUSE ([Thing], [Event BECOME ([Event BE ([Thing], [*asleep*])])])]

Notice the argument, the state in *guk-ka* 'be asleep', represented in italics, deletes and replaces the place argument in the LCS of the verb *ge-na* 'put'. The other aspects of the LCS of the verb that are deleted are identical to the LCS of the coverb that replaces it. This argument though, is the crucial difference in meaning between a bare verb *ge-na* 'put' and a complex predicate *guk-ka ge-na* 'put to sleep'.

The next example shows an LCS that has been completely deleted by that of the coverb. The inflecting verb *ya(ma)-* 'say/do/become', which here functions as 'become', contains no more predicate function that the coverb with which is it combining, *bort-ta* 'die'. Therefore the LCS of the complex predicate is identical to the LCS of the coverb itself apart from, again, the resultative state *dead*. This illustrates an example of the template in (52).

(57) *bort-ta* 'die *(cv)*' [Event BECOME ([Event BE ([Thing], [*dead*])])]
↓ ↓
ya(ma)- 'become *(v)*' ~~[Event BECOME ([Event BE ([Thing], [Place])])]~~

bort-ta ya(ma)- 'die/become dead'
[Event BECOME ([Event BE ([Thing], [*dead*])])]

In examples of this type, the verb contributes no meaning that is not already present in the coverb. However, due to the mechanics of predicate fusion, specifically the condition that all predicate functions in the LCS of the coverb must be represented in the LCS of the verb, the inflecting verb *ya(ma)-* 'become' is necessary for the complex predicate *bort-ta ya(ma)-* 'die/become dead' to be well-formed.

In (58), the coverb *bort-ta* 'die' is merged with the verb *ge-na* 'put'. The highest function in the coverb *bort-ta* 'die' is BECOME. Thus, everything in the LCS of the inflecting verb *ge-na* 'put' that occurs from the BECOME function onward is deleted and replaced by the entire LCS of the coverb. This is an example of the template in (53).

(58) *bort-ta* 'die *(cv)*' [Event BECOME ([Event BE ([Thing], [*dead*])])]
↓ ↓
ge-na 'put *(v)*'
[Event CAUSE ([Thing], ~~[Event BECOME ([Event BE ([Thing], [Place])])]~~)]

bort-ta ge-na 'kill *(cp)*'
[Event CAUSE ([Thing], [Event BECOME ([Event BE ([Thing], [*dead*])])])]

Templates like those in (50) through (53) can also be constructed to represent the merger of coverbs of motion with various verbs. Motion predicates are represented in lexical-conceptual structures as containing the function MOVE and TO. The fusion templates are as follows:

(59) Coverb MOVE TO
↓ ↓
Verb MOVE TO

(60) Coverb MOVE TO
↓ ↓
Verb CAUSE MOVE TO

(61) Coverb CAUSE MOVE TO
↓ ↓ ↓
Verb CAUSE MOVE TO

4.2.3 Impossible mergers

This account of predicate merger also predicts which coverb verb combinations cannot occur. In (158), the coverb contains a MOVE function but no TO function; it does not take a path. Thus when combining the coverb *wirnh-na* 'whistle' with the verb *di-nya* 'come', the mechanics of predicate fusion require that the TO function of the verb is deleted.

(62) *wirnh-na* 'whistle *(cv)*' [$_{\text{Event}}$ MOVE ([*whistle*]) ([$_{\text{Thing}}$])]
↓ ↓
di-nya 'come *(v)*' ~~[$_{\text{Event}}$ MOVE ([$_{\text{Thing}}$], [$_{\text{Path}}$ TO ([*here*])])]~~

**wirnh-na di-nya*
*'come whistling *(cp)*' [$_{\text{Event}}$ MOVE ([*whistle*]) ([$_{\text{Thing}}$])]

The reason that this last complex predicate, *wirnh-na di-nya* 'come whistling', is ungrammatical is that it does not faithfully represent the information that each of the independent elements specifies. The output does not accurately represent the input. A path argument that is specified by *di-nya* 'come' is missing from the LCS of the entire complex predicate. Predicate fusion by LCS deletion is still subject to the requirement that the output and the input correspond.

4.2.4 Problems

Predicate fusion by the deletion of lexical-conceptual structures does not correctly predict which forms emerge and which are ungrammatical. The stative verb *yu-nginy* 'be' frequently

occurs with actions, provided they do not lexically specify a path. So *yu-nginy* may combine with *dabulp-pa* ‘smoke’ as in (63) but not with *wilh-ma* ‘walk’ in (64).

(63) dabulp-pa ga-yu bakka
smoke-ASP 3sg.PRES-be tobacco
“He’s smoking tobacco”

(64) *wilh-ma ga-yu
walk-ASP 3sg.PRES-be
*“He is walking”

The sentence in (64) is correctly predicted to be ungrammatical under this concept of fusion by LCS deletion. The LCS of the verb does not contain the predicate function move, which is the highest function in the LCS of *wilh-ma* ‘walk’, and thus, fusion cannot begin. Sentence (63) however, should similarly be ruled out by this condition.

(65) *wilh-ma* ‘walk *(cv)*’ [Event MOVE ([*walk*]) ([Thing], [Path TO ([Place])])]

yu-nginy ‘be *(v)*’ [Event BE ([Thing], [Place])]

**wilh-ma yu-nginy*

(66) *dabulp-pa* ‘smoke *(cv)*’ [Event MOVE ([*smoke*]) ([Thing])]

yu-nginy ‘be *(v)*’ [Event BE ([Thing], [Place])]

dabulp-pa yu-nginy ‘be smoking *(cp)*’
[Event MOVE ([*smoke*]) ([Thing])]

The complex predicate in (65) is not a grammatical sentence. When constructed for speakers, sentences with this structure are rejected and replaced with grammatical forms that involve the merger of a motion like *wilh-ma* ‘walk’ with a motion verb like *ya-nggi* ‘go’. The complex predicate *dabulp-pa yu-nginy* ‘be smoking’ is grammatical. It is frequently attested in natural speech and often given during elicitation. These mergers can be represented in generic templates to visualise the merger that is occurring.

(67)

Coverb	MOVE	TO
	↓	↓
Verb	BE	*

(68) Coverb MOVE
↓
Verb BE

The template in (67) illustrates a coverb of motion, which has a MOVE function and a TO function, merging with a stative verb that has only a BE function. It represents (64) above. These forms are ungrammatical. Those represented by (68) involve the merger of a coverb of activity, which contains a MOVE function, with a stative verb that contains BE. An example is sentence (63). These *are* grammatical, yet fusion predicts, due to the fact that they do not even have a predicate function in common, that they may not possibly combine.

The template in (68) and examples of complex predicates such as *dabulp-pa yu-nginy* 'be smoking', represent a problem for this analysis. They occur frequently yet the model clearly predicts that they should not. It is possible that the functions MOVE and BE are compatible with each other, that is, MOVE is allowed to delete and replace BE. However this is untestable as there are no other coverb verb combinations that would require the MOVE function to delete and replace the BE function.

(69) Coverb CAUSE MOVE
↓ ↓
Verb CAUSE BE

A sentence that schematically takes the form of the template in (69) would serve to indicate whether MOVE can delete and replace BE, as suggested above, or if instances of activity coverbs merging with stative coverbs are irregular. Cases like this are impossible due to the fact that Wagiman has no coverbs that contain the functions CAUSE and MOVE without TO; there are no verbs that denote caused actions rather than caused motions.

However, there are coverbs such as *berrh-ma* 'throw' and *jowk-ka* 'send' that contain the functions CAUSE MOVE and TO, but as demonstrated by the ungrammaticality of *wilh-ma yu-nginy* 'be walking' in (65); the TO function in the LCS of the coverb has no representation in the LCS of the verb. Moreover, there are no predicates in Wagiman, either verbs or coverbs, that contain CAUSE and BE but not TO. I take a structure such as CAUSE to BE as universally impossible based on the assumption that a change of state, caused or otherwise, requires the primitive semantic function BECOME.

Another possibility of explaining the merger of activity coverbs that have a MOVE function with stative verbs that have a BE function is that there are no other possible choices of verb. There are no Wagiman verbs that contain only a MOVE function. *Ya-nggi* 'go', as a main verb

and when combined with coverbs of motion, contains the functions MOVE and TO; it requires a path. When it combines with activity verbs however, it occurs as a light verb that denotes durativity and means 'do for long time' or simply 'do lots'. In terms of the lexical-conceptual structure, *ya-nggi* 'do for a long time', the light verb, contains a single MOVE function.

(70) *Ya-nggi* 'do for a long time *(lv)*' [$_{\text{Event}}$ MOVE ([– *for a long time*])([$_{\text{Thing}}$])]

This would at first appear to be a perfect candidate for an inflecting verb with which activities may combine. Indeed, it does combine frequently with activity coverbs, but an added durativity component is always present in these.

(71) dabulp-pa ga-ya wolon, gahan yemotj
smoke-ASP 3sg.PRES-go grass that young initiated man
"He smokes grass lots, that young man" (LL: AW_0034)

This sentence differs from one that contains the complex predicate *dabbulp-pa yu-nginy* 'be smoking' since, in (71), the subject, the young man, is possibly not be smoking at the time of the utterance. If the same sentence were expressed with *ga-yu* 'he is' instead of *ga-ya* 'he goes', then it would mean 'he is smoking grass (right now)' and not 'he smokes grass (generally)'. *Ya-nggi* 'go' when used as a light verb conveys an extra component that *yu-nginy* 'be' does not.

There is no verb in Wagiman that denotes an activity without any other meaning components such as durativity. Thus, given the lack of alternatives, *yu-nginy* 'be' serves to fill this void and may combine with activities to express the unmarked performance of that activity – *he is smoking* rather than *he smokes (lots)*. In these instances alone, MOVE may delete and replace BE:

(72) Coverb MOVE
↓
Verb BE

(73) *dabulp-pa* 'smoke *(cv)*' [$_{\text{Event}}$ MOVE ([*smoke*]) ([$_{\text{Thing}}$])]

yu-nginy 'be *(v)*' ~~[$_{\text{Event}}$ BE ([$_{\text{Thing}}$], [$_{\text{Place}}$])]~~

dabulp-pa yu-nginy 'be smoking *(cp)*'
[$_{\text{Event}}$ MOVE ([*smoke*]) ([$_{\text{Thing}}$])]

This is consistent with the observation discussed in 3.2.1 that *yu-nginy* 'be' and other stative verbs are gradually undergoing a process of grammaticalisation. This began with all three stance verbs *yu-nginy* 'lie', *ni-nginy* 'sit' and *da-nginy* 'stand', becoming light verbs and continues with *yu-nginy* 'be' behaving as a copular verb in simplex predicates. It may be the case that the verb *yu-nginy* 'be' is becoming used as a copular verb in complex predicates as well as simplex ones.

4.2.5 *Di-nya* 'come'

Another problem arises when attempting to explain the merger of coverbs like *wilh-ma* 'walk' with verbs like *di-nya* 'come', which always denotes an argument [$_{\text{Path}}$ TO ([*here*])]. As the next example demonstrates, this path argument should not emerge in the LCS of the entire complex predicate[5]:

(74) *wilh-ma* 'walk *(cv)*' [$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$])]

di-nya 'come' ~~[$_{\text{Event}}$ MOVE ([$_{\text{Thing}}$], [$_{\text{Path}}$ TO ([*here*])])]~~

wilh-ma di-nya 'walk here *(cv)*'

[$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$ TO ([*here*])])]

💣 [$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$])]

The complex predicate that emerges in natural speech contains the path argument [$_{\text{Path}}$ to ([*here*])], yet LCS deletion as a means of predicate fusion predicts that this specific path argument is deleted and replaced by a generic, non-specific path function [$_{\text{Path}}$ TO ([*anywhere*])].

I propose that *di-nya* 'come' overrides the mechanics of fusion by virtue of the specific path argument within its LCS. This stipulation is untestable as there are no other Wagiman verbs that specify, not only the presence of a path argument, but also the very form of that path argument.

The data requires the acceptance, in formal terms, of *yu-nginy* 'be' as a *de facto* activity verb in the absence of a true one. Similarly, *di-nya* 'come' may have to be accepted as a verb that overrides a condition of predicate fusion. The condition is that the LCS of the coverb deletes the LCS of the verb from the point of the highest predicate function in the LCS of the

[5] Following from the notation of Optimality Theory, a symbol of a bomb represents a form that the model predicts but which is incorrect.

coverb downward. Fusion as it is conceptualised here *should* delete the path argument inherent in *di-nya* 'come', but to do so would mean that the LCS of the output, that of the complex predicate, does not correspond with the LCS of the input.

This differs from cases discussed earlier in this section, such as (158), *wirnh-na di-nya* 'come whistling', which are considered ungrammatical due to the presence of a path argument in the LCS of the verb, which is deleted by the LCS of the coverb. In those examples, the coverb does not contain a path argument. Thus, the path argument of the verb is being deleted and not replaced. Here, the coverb does contain a path argument. So, all that is being overridden is the replacement of a specific argument [$_{\text{Path}}$ TO ([*here*])], with a non-specific one [$_{\text{Path}}$ TO ([$_{\text{Place}}$])].

Another way to conceptualise the 'overriding' of the conditions on fusion would be to assume that specific arguments, that is, those that occur in italics rather than in subscript font, are unified into the LCS *after* fusion has occurred. A coverb and a verb such as shown in (75) are allowably combined. After fusion occurs, the path argument of the complex predicate is filled by the path that the verb *di-nya* 'come' lexically specifies.

(75) *wilh-ma* 'walk *(cv)*' [$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$])]

↓ ↓

di-nya 'come' ~~[$_{\text{Event}}$ MOVE ([$_{\text{Thing}}$], [$_{\text{Path}}$])]~~

[$_{\text{Path}}$] = [$_{\text{Path}}$ TO ([*here*])]

wilh-ma di-nya 'walk here' [$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$])]

[$_{\text{Path}}$] = [$_{\text{Path}}$ TO ([*here*])]

[$_{\text{Event}}$ MOVE ([*walk*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$ TO ([*here*])])]

The notation [$_{\text{Path}}$] = [$_{\text{Path}}$ TO ([*here*])] is shorthand for 'the path argument in this LCS is realised as *to here*'. This contrasts with an example in which the same path is blocked from occurring in the LCS of the entire complex predicate, such as (62), *wirnh-na di-nya* 'come whistling'. Since the coverb *wirnh-na* 'whistle' does not contain a place into which a path argument can be unified, such a position is deleted from the LCS of the verb *di-nya* 'come'. As a result, the grammar then attempts to insert the path argument as specified by the verb but there is no position available to it. Unlike here, where the position for the path is maintained and then subsequently filled, post-merger. Here is the complex predicate *wirnh-na di-nya* 'come whistling' represented again with this amendment.

(76) *wirnh-na* 'whistle' [$_{Event}$ MOVE ([*whistle*]) ([$_{Thing}$])]

di-nya 'come' ~~[$_{Event}$~~ MOVE ~~([$_{Thing}$], [$_{Path}$])]~~

[$_{Path}$] = [$_{Path}$ TO ([*here*])]

**wirnh-na di-nya*
*'come whistling' [$_{Event}$ MOVE ([*whistle*]) ([$_{Thing}$])]

*[$_{Path}$] = [$_{Path}$ TO ([*here*])] *(no [$_{Path}$] available)*

Since the LCS into which the grammar is required to put this specification for path contains no position for path, the information *to here* cannot be represented.

The notation and formalism used to express this idea may vary, but the concept is constant. Arguments that contain meaningful information (italicised content) rather than generic or schematic information (subscripted content) is entered into the LCS after fusion occurs.

4.2.6 Summary

Predicate fusion works by the deletion of predicate information contained in the verb, and its replacement with corresponding predicate information from the coverb. There are four conditions to predicate fusion. Firstly, the highest (i.e. left-most) predicate function in the LCS of the coverb occur somewhere in the LCS of the verb. Secondly, all other lower (i.e. to the right) predicate functions must correspond exactly. Third, the output LCS must correspond to the LCSs of each element that comprises the input. Lastly, a specific argument (i.e. an argument that is notated in italics) contained in the LCS of the verb is also contained in the LCS of the complex predicate.

There is also an exception to the process of fusion inasmuch as it applies directly to Wagiman. The exception is that activity coverbs, whose LCSs contain MOVE, may replace the LCS of stative verbs containing BE when the intended meaning conveys no more that the unmarked instance of that activity. Thus, activity coverbs and stative verbs may combine to form complex predicates that convey activities.

4.3 Baker & Harvey model of predicate formation

Predicate fusion provides a model for the semantic interpretation of coverb constructions in Wagiman. However, it does not address the limitations of complex predicate formation. While Wilson states that some coverb-verb combinations are impossible, his explanation for

their ungrammaticality is that predicate fusion does not explicitly allow the predicates to merge (Wilson, 1999:151). He does not rule out their occurrence.

The constraint-based model proposed by Baker & Harvey (MS) restricts complex predicate formation. The proposed constraints delimit the range of possible meanings that can be expressed by complex predicates. Baker & Harvey propose that complex predicates fall into two classes - those involving predicate fusion and those involving the coindexation of arguments. The former are labelled 'merger' complex predicates and the latter are called 'coindexation'.

4.3.1 Merger versus Coindexation

Baker & Harvey (MS) propose initially that within the classification of complex predicates are two sub-classes, those resulting from merger and those resulting from coindexation. The combining of predicates and argument structures as outlined in 4.2, fusion, is an example of merger in the terminology of Baker & Harvey (MS). I will use the term 'merger' hereafter.

Merger and coindexation are differentiated by their means of combining predicational information into a monoclausal structure; their means of forming a complex predicate. Complex predicates formed by merger produce argument structures whose range coincides with the semantic range of simplex predicates. In other words, merger derives predicates with the same range of argument structures as monomorphemic verbs. Complex predicates formed by coindexation on the other hand, are not restricted to this range of argument structures as they are not monopredicational. As such they can express a much wider range of meaning than a simple predicate. The clearest case of coindexation complex predicates is verb serialisation; distinct verbs with distinct argument structures share some or all of their arguments by coindexation.

Wagiman complex predicates are formed by merger and therefore conform to the range of argument structures available for monomorphemic verbs. That is, the range of argument structures available to complex predicates formed by merger corresponds to the range of argument structures available to all predicates. A complex predicate is not more complex at the level of argument structure than a monomorphemic predicate.

4.3.2 The Constraints

Baker & Harvey propose that there are two constraints operating on the formation of monomorphemic predicates. Complex predicates formed by merger are taken to be

functionally equivalent as monomorphemic predicates and are therefore also restricted to the two constraints, which are given below:

(77) a) Each predicate function – e.g. CAUSE can appear only once.

b) Predicate functions must appear in the order CAUSE > BECOME > BE

These two constraints restrict the possibilities of semantic representation that can be contained in a monomorphemic predicate, complex or otherwise. The second constraint as it is formulated here constrains the formation of inchoatives from states, and the formation of caused changes of state from inchoatives. As this analysis goes beyond inchoative and stative predicates it will be necessary to reformulate this constraint. Section 6.2 deals specifically with this issue.

4.3.2.1 Predicate functions appear only once

The constraint in (77) a) rules out the possibility of a word containing more than one instance of a single predicate function. A concocted word, say, *frep* whereby the sentence 'I frepped you him' is a paraphrase of 'I caused you to kill him'. Given that 'kill' already contains a CAUSE function, the overall predicate has an LCS in (78).

(78) *Frep* 'cause to kill'
[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$],[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$],[$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$],[*dead*])])])])]

This is a direct violation of the first constraint in that it has two instantiations of the predicate function CAUSE. It is therefore predicted to not occur in any monomorphemic predicate, either simple or complex. This argument structure is possible in multi-predicational constructions such as serialised verbs or biclausal structures. The argument structure itself is not being prohibited. What is being prohibited by this constraint is the encoding of this argument structure in a monomorphemic predicate or a merger complex predicate.

The monomorphemic English lexical item *feed* presents a problem for this analysis, since it has been analysed as containing *eat* and *eat* has been analysed as containing a CAUSE predicate (Jackendoff, 1990:253). *Eat* is stipulated to have an LCS such as:

(79) *Eat*
[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$ *x*],[$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$],[$_{\text{Place}}$ *stomach of x*])])])]

Eat is not in itself a problem for the model since this argument structure conforms to both constraints; it does not repeat a predicate function and they occur in the correct order. However, the analysis of *feed* is taken to be 'cause to eat', in which case *feed* will have two instances of the function CAUSE.

I disagree with the analysis of *eat* as a causative predicate. Instead I take *eat* to be an activity, thereby similar in structure to verbs such as *run*, *smoke* or *read* and not at all similar to other causative predicates such as *put* or *kill*[6].

4.3.2.2 Predicate functions occur in order

The constraint described in (77) b) prohibits the formation of predicates that have the functions configured incorrectly. That is, the order CAUSE > BECOME > BE must be adhered to. No monopredicational structure will encode states as temporally prior to causes. For instance, a word such as *twingle*, whereby the configuration 'I twingled him' is taken to mean 'I was in a manic state and killed him', encodes an argument structure that is unable to be represented in a monopredicational structure. *Twingle*, as given above has an LCS as given in (80).

(80) *twingle* 'be manic and kill'
[$_{\text{Event}}$ BE ([*manic*],[$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$],[$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$],[*dead*])])])])]

Of course it is possible to express this meaning using either a bi-clausal structure 'I was manic, I killed him', or possibly by using a multi-predicational structure such as 'I manically killed him'. In fact many Papuan languages do this with serialised verb constructions and clause chaining. In (81) is an example from Alamblak in which a state precedes an inchoative, thereby violating (77) b).

(81) dbëhna - noh - më - r
sick-die-REM.PAST-3sgm
'He was sick and died' (Bruce, 1979, p. 242)

Similarly with *frep* in (78), the constraints do not prevent such event structures as these from emerging. Rather they are prohibited from being encoded by a single, monopredicational structure such as a monomorphemic verb root or a complex predicate formed by merger.

[6] *Eat* is possibly not analysed as containing a CAUSE function. It may consist simply of a MOVE function, which refers to all actions and motions. Alternatively, *feed* might be analysed not as *cause to eat* but as *cause food to go to stomach of someone*. This also explains the aberrant case of *intravenously feed*. Verbs such as this are problematic and require further investigation.

4.4 Summary

These two constraints operating together restrict the range of possible monopredicational argument structures. As such they are proposed to constrain both monomorphemic verb roots and the formation of complex predicates by merger. The Baker & Harvey (MS) model is a constraint-based account of predicate formation. It predicts that some complex predicates are possible and that others are impossible. These predictions, moreover, can be tested, but to do so requires the use of negative forms of evidence.

Integrating this model and the Wilson (1999) model of predicate fusion in Wagiman provides the means by which these empirical claims can be experimentally studied. Wilson (1999) describes how to form complex predicates and Baker & Harvey (MS) constrains possible complex predicates. In the sections that follow I will apply the Baker & Harvey model to the data to see if it endures attempted falsification. To do so will require the employment of negative forms of data, which is necessary in a constraint-based account, though it needs to be theoretically justified.

5 Impossible combinations and rejection

Evidence from verbalisation, discussed in section 2.1.2.5, shows that there is a clear distinction in Wagiman between inchoative and stative coverbs. Analytically, this is represented by the presence or absence of the predicate function BECOME in the lexical representation of the coverb. Coverbs whose lexical entry includes a BECOME function are distinguished both morphologically and syntactically from coverbs whose lexical entries do not.

One clear difference that results from this is that inchoative coverbs cannot combine with stative inflecting verbs to form merger complex predicates. The Wilson (1999) model of predicate fusion, which ensures that the LCS of the coverb overwrites the LCS of the verb, means that any successful merger of an inchoative coverb and a stative verb results in be operating before become. This however, violates the constraints of the Baker & Harvey (MS). No combination of the predicate functions within the LCSs of inchoative coverbs and stative verbs can merge and satisfy both the conditions on predicate fusion and the Baker & Harvey (MS) constraints.

The distinction between inchoatives and statives is made clearer by evidence from nominalisation, the process by which stative nominals are derived from coverbs that have a state as an inherent part of their argument structure. Stative and inchoative coverbs are both types of predicates that contain an inherent state, and each is able to take derivational morphology to form a nominal expressing this state. However, inchoatives and statives differ in the sort of morphology that is used in deriving nominals. Inchoative coverbs form nominals when they are circumfixed with *ma- -yin*, discussed in 5.1.1, and stative coverbs form nominals when prefixed with *nu-*, discussed in 5.1.2. This chapter argues that the difference in the morphology is due to the different structural properties of inchoatives and states, that is, the presence of the BECOME function in the lexical representation of inchoatives.

Further, I will argue in this chapter that the predictions of both the Wilson (1999) and the Baker & Harvey (MS) models with regard to the interaction of stative and inchoative predicates can be tested by negative evidence from rejection. The models of Wilson (1999) and Baker & Harvey (MS) predict that particular coverb constructions are possible and conversely, that other coverb constructions are impossible. Negative evidence, such as the rejection of the forms predicted to be impossible, agrees with this.

5.1 Statives and Inchoatives

The argument structures of coverbs can be investigated independently of inflecting verbs by examining their meanings when verbalised (See section 2.1.2.5). One significant result of this was that there is a dichotomy between coverbs that denote simple states, such as *guk-ka* 'be asleep', and coverbs that denote changes of state, such as *bort-ta* 'die'. The stative coverbs, contain a single BE function in their lexical representations the inchoative coverbs, contain a BECOME function as well. The lexical conceptual structures of these two main predicate classifications are given in (82) and (83).

(82) Stative predicates: $[_{\text{Event}}([\text{BE}([_{\text{Thing}}], [_{\text{Place/property}}])])]$

(83) Inchoative predicates: $[_{\text{Event}}([\text{BECOME}([_{\text{Event}}([\text{BE}([_{\text{Thing}}], [_{\text{Place/property}}])])])])]$

The difference in meaning between these two types of events is that inchoative predicates primarily encode a change in state rather than the resultant state itself. For example, *that man is dying* does not entail that the man is dead. The resultant state has not yet been achieved. However, the state 'dead' is still present, in some respect, in the meaning of 'die', even if it is not realised. The primary focus of an inchoative is the gradual change over time between an initial state and the resultant state rather than the resultant state itself.

A central part of the concept of verbalisation and the argument structures involved was the way in which tense operates with states and inchoatives. For example, an inchoative such as *bort-ta* 'die' verbalised and inflected for the present tense necessitates that the argument, the 'dier', is still alive and still undergoing the change. If (or when) they die, then the change of state is no longer occurring and may no longer be described using the present tense. The verbalised coverb must inflect for past tense. As such, inchoatives are inherently dynamic. The two examples below demonstrate this.

(84) modaga-yi bu-ni gahan lamarra, bort-ta-yi
car-ERG 3sgA.3sgO.PAST-hit-PAST that dog 3sg.PAST-die-PAST
"A car hit that dog, he died" (JH: AW_0021)

(85) nyongh-nga ga-yu, ga-bort-da-n now
sick-ASP 3sg.PRES-be 3sg.PRES-die-ASP-PRES now
'He's sick, he is dying now' (LM: wag.disc2)

(84) denotes a change of state that has been completed as it uses the past tense inflection *-yi* on the verbalised coverb *bort-ta* 'die', whereas (85) denotes a change of state that is still occurring, at least within the temporal limits of the utterance. This is the case because of the present tense marking *-n* on the verbalised coverb.

Stative predicates operate differently with respect to tense. A verbalised inchoative coverb inflected for past tense, (84), expresses the same dynamics of an event as a verbalised stative coverb inflected for present tense, (86).

(86) ga-guk-ka-n dappul-ba-nehen
3sg-sleep-ASP-PRES smoke-ASP-PRIV
"He doesn't smoke while sleeping"
(Lit. 'He is asleep without smoking') (JH: AW_0029)

In other words, to express the resultant state 'dead', past tense must be used since *bort-ta* 'die'. To do the same using a stative verb requires the present tense instead. They each convey a simple state but a different inflection is required to do so.

The distinction between coverbs expressing simple states and coverbs expressing changes of state affects other aspects of Wagiman morphosyntax. A process of nominalisation derives stative nominals[7] from coverbs that have a state as a part of their basic structure. However, inchoatives and statives take different nominalisation derivations. Inchoative coverbs are derived using the circumfix *ma- -yin* whereas states take the prefix *nu-*.

5.1.1 Inchoative coverbs and the *ma- -yin* circumfix

Inchoative coverbs may take the *ma- -yin* circumfix to derive stative nominals. *Bak-ka* 'break' and *bort-ta* 'die' each occur frequently as stative nominals with the *ma- -yin* circumfix, but *ma- -yin* is also attested in freely given examples in occurrence with coverbs such as *dorrhdorr-ma* 'tear' and *jirrp-pa* 'spill'.

This circumfix occurs productively with all inchoative coverbs, but not all such combinations have been attested in free, natural speech. Many have been recorded only as a result of direct prompting. The examples in (87) and (88) show how this morpheme is used.

[7] The term 'stative nominal' is used because Wagiman, like most Australian languages, makes no formal distinction between the parts of speech usually called 'noun' and 'adjective'. A 'stative nominal' is similar to 'adjective'.

(87) bort yaha-ny
die.PERF 3sg.PAST-become-PERF
'He died' (LL: AW_0036)

(88) ma-bort-ta-yin linyi-ra, wirri-gunda
NOM-die-ASP-NOM 3sg.PAST-fall-PAST tree-ABL
'It (the bird) fell down dead, already dead, from the tree' (LL: AW_0036)

The first of these examples demonstrates an inchoative coverb being combined in a complex predicate with an intransitive verb *ya(ma)-* 'say/do/become'[8]. Although the verb here contributes no meaning beyond what is conveyed by the coverb, it cannot be considered semantically empty (See section 4.2 for discussion). Part of its function though, is to allow the coverb to act as the main predicate in the clause.

In the second, the word *ma-bort-ta-yin* is a nominal predicated of the undergoer of *linyi-ra* 'fall', the omitted bird. The nominalised coverb here does not contain the BECOME predicate function that the unmarked coverb in (87) does. That is, this sentence is not understood as 'it became dead and it fell' nor as "It became dead as a result of falling'. It is understood as 'the thing that had already died fell from the tree'. This is the case generally for the *ma- -yin* forms. Many of the English translations of words containing *ma- -yin* reflect a variant of the quasi-perfective aspect captured by 'already'.

(89) ma-jup-pa-yin yondorrin gahan
NOM-block-ASP-NOM road that
'That road is already shut' (LL: AW_0036)

The translation of this sentence into English suggests that these derived forms are more than simple stative nominals. If they were, then this sentence would have been translated as just 'that road is blocked'. The presence of 'already' signals a further component that the speaker find difficult to translate. I take this as evidence for the claim that the *ma- -yin* circumfix operates by removing the BECOME function, leaving a derived nominal that emphasises the resultant state and not the change that led to it.

The examples in (90) and (91) illustrate further the removal of the BECOME function as a result of the derivation from coverb to nominal. The first of these has an inchoative coverb *dok-ka* 'gut' combining with an active transitive verb *bu-ni* 'hit', and the second shows the

[8] *Ya(ma)-* 'say/do/become' has multiple lexical entries. It most often occurs as 'say' since there is not other inflecting verb that can do so. 'Do' and 'become' however, may be expressed by other verbs. In this example it functions as 'become'.

nominalised version of the same coverb. The nominalised coverb retains the resultant state of being 'gutted', but has lost the component conveying the dynamicity of the change.

(90) dok-ka mi-bu majalin
gut-ASP 2sg.IMP-hit fish
'Gut the fish!' (LL: AW_0025)

(91) ma-dok-ka-yin mahan tyre
NOM-gut-ASP-NOM this tyre
'This tyre has a hole' (LL: AW_0036)

This sentence was translated as a static event like 'he's got a hole (in him)', rather than the result of a dynamic process such as 'he has been gutted'. The BECOME function is no longer present in the argument structure of inchoative coverbs that undergo nominalisation by *ma- -yin* circumfixation.

5.1.2 Stative Coverbs with *nu-*

Some coverbs such as *wirril-ma* 'be red' and *mele-ma* 'be black' only seldom occur as bare coverbs and are most often manifest as the nominalised states *nu-wirril-ma* and *no-mele-ma*[9]. Other examples of coverbs that often take the *nu-* prefix are *dardatj-ja* 'be tough' and *gelyeng-nga* 'be raw'.

As illustrated in the argument structure given in (82), stative predicates contain only a BE predicate function and not the BECOME function like inchoative coverbs. The claim of section 5.1.1 is that the *ma- -yin* circumfix operates by removing the BECOME function from the argument structure of coverbs. Since stative coverbs do not contain BECOME functions, they should not form nominals with the *ma- -yin* circumfix.

Stative coverbs may take a derivational prefix *nu-* (or its allomorphic variant *no-*), which derives a stative nominal[10]. Coverbs prefixed with *nu-* may not combine with any inflecting verb to form complex predicates, but may occur predicatively with an inflecting verb in stative clauses such as in (92).

(92) worrok-ka nga-ma-n nganing-gin lawel, ga-ba-yu nu-jilirr-ma
work-ASP 1sg-get-PRES 1sg-GEN clothes 3pl.PRES-be NOM-wet-ASP
'I washed my clothes, now they're all wet' (HL: AW_0020)

[9] *No-* is a vowel-harmonised variant of *nu-*. A brief discussion of vowel harmony is given in Wilson (1999:174).
[10] The *-nu* prefix is also widely attested with nominal roots. It is very common with, though not restricted to, male kinship terms. E.g., *nu-wappa-mang* 'brother', *nu-naw-ma* 'lots'.

This example shows a nominalised stative coverb occurring as an argument of a clause headed by the verb *yu-nginy*. This sentence could equally have been given with the bare coverb *jilirr-ma* with very little, if any, difference in meaning. However, this is not sufficient evidence to conclude that coverbs with *nu-* are still coverbal. In fact there is evidence to the contrary. Combining a stative coverb like *jilirr-ma* 'be wet' with a causative verb like *ge-na* 'put' will produce a complex predicate meaning 'cause to be wet'. Yet, the same combination cannot occur with a stative coverb prefixed with *nu-*.

(93) *nu-jilirr-ma nga-ba-ge-na lawel nganing-gin
NOM-be wet-ASP 1sgA-3plO-put-PAST clothes 1sg-GEN
*"I made my clothes wet"

Nominalised coverbs are unable to merge with verbs to form complex predicates. The inflecting verb in (92), *yu-nginy* 'be' acts as a copula[11] and connects the attribute *nu-jilirr-ma* 'wet' with the object of wash, *lawel* 'clothes'. The verb here is not serving as a light verb through which *jilirr-ma* is able to predicate.

Given below is an example of a nominalised coverb acting as a modifier within a phrase and not as a co-head of the clause.

(94) nu-wirril-ma goron nga-laikki-ma-n
NOM-red-ASP house 1sgA.3sgO-like-ASP-PRES
'I want a red house' (HL: AW_0020)

In (94), both *nu-wirril-ma* 'red' and *goron* 'house' lack overt case marking. Absolutive case in Wagiman is, like many ergative-absolutive languages, zero-marked. Thus 'red' and 'house' in (94) may both be absolutive in which case they form a single noun phrase, the object of *nga-laikki-ma-n* 'I like it'. If this is the case, *nu-wirril-ma* 'red' is operating as a nominal modifying the noun phrase rather than a coverb.

Finally, examples (95) and (96) below illustrate the syntactic similarity between a clause containing a nominalised coverb and no verb and a clause containing only nominals. It would be grammatical to insert *ga-yu* 's/he is' anywhere in these sentences to act as a copula, but it is not obligatory.

[11] Wilson (1999:42) points out that *yu-nginy* 'be' is formally intransitive yet it always requires either a coverb or a predicative complement. Wilson too, takes this verb to be a copula. I will not diverge from this.

(95) no-gelyeng-nga gahan lamang
NOM-be raw-ASP that meat
'That meat is raw' (LL: AW_0028)

(96) lamarra gahan maman
dog that good
'That dog is good' (LL: AW_0022)

Again, this evidence is not proof. Rather it illustrates similarities of usage between a genuine nominal such as *maman* 'good', and a nominal derived from a state such as *no-gelyeng-nga* 'raw'.

Stative coverbs prefixed with *nu-* exhibit behaviour that indicates that they class with nominals rather than coverbs. They may not combine with any verb other than *yu-nginy* 'be', which, in those instances operates as a copula rather than a light verb. They may not for causatives with *ge-na* 'put' whereas all underived stative coverbs may. Stative nominals modify noun phrases and not entire clauses and they show the same distribution as genuine nominals.

5.1.3 Substantive nominalisations

There are examples of coverbs that are nominalised with *nu-* to form substantive nominals rather than stative ones. These forms differ from those discussed above in 5.1.2 in that the underived coverbs mostly denote activities rather than states. Example (97) illustrates this.

(97) nu-gaygay gahan nendu
NOM-yell out that horse
'It was a yeller, that horse' (LM: texts.1)

The productivity of this form of nominalisation is not clear but has only been attested in a small number of instances. These include *no-wewa* 'thief', which derives from a non-finite verb *wewa-yan* 'stealing', *no-wern-na* 'troublemaker', from *wern-na* 'to cause trouble' and *no-borrongh-nga* 'swaggerer', from *borrongh-nga* 'to swagger'. These nominalisations exhibit some irregularity and some evidence of lexicalisation. Moreover, they do not all derive from the same class of coverbs nor even the same part of speech; *borrongh-nga* 'swagger', for instance, is a coverb of motion and *wewa-yan* 'stealing' is a non-finite verb[12].

[12] Non-finite verbs have not been discussed as they are of no importance to this investigation. It is possible that they derived originally from coverbs and this would explain both this instance *no-wewa* 'thief', as well as the

They are therefore not included in this analysis, which focuses on nominalisation of stative coverbs.

5.1.4 Summary

There is a dichotomy between stative and inchoative coverbs on the basis of derivational processes such as verbalisation – discussed in section 2.1.2.5 – and nominalisation discussed in this section. Inchoative coverbs do not take the *nu-* prefix and stative coverbs do not take the *ma- -yin* circumfix.

The dichotomy in coverb classes demonstrated in sections 5.1.1 and 5.1.2 focuses on coverbs that have a state as their basic semantic operator. Statives, which contain only a BE function, form derived nominals with the prefix *nu-*. Inchoatives on the other hand, contain a BECOME function as well as the BE function and must be derived with a circumfix *ma- -yin* to form nominals. This circumfix operates by removing the BECOME function from the argument structure, leaving only the BE function. As such, the nominalised inchoatives focus on the resultant state and not the change of state.

This dichotomy between stative and inchoative coverbs is maintained in the combinations of those coverbs with the relevant inflecting verbs. Inchoative coverbs are not able to combine with stative verbs. For example the combination *bak-ka yu-nginy* 'be + break' is stipulated to be an impossible combination as it requires the fusing of a stative verb with an inchoative coverb. This combination is ruled out by both the Baker & Harvey (MS) model and the Wilson (1999) model of fusion.

5.2 Analyses and predictions

The sections that follow discuss the differences between inchoative and stative coverbs as to their allowable combinations as predicted by the theoretical models outlined in chapter 4. The Wilson (1999) and Baker & Harvey (MS) models predict which combinations are possible and which are not.

The Baker & Harvey (MS) constraints that operate on complex predicate formation in Wagiman are described in terms of predicate functions and semantic operators within the argument structures of coverb and verbs. For instance, the second constraint in Baker & Harvey (MS) ensures that the order of the predicate functions has CAUSE occurring before BECOME occurring before BE. The mechanism by which argument structures merge, predicate

fact that they all obligatorily take a suffix *-yan*, which bears an obvious resemblance to the continuous suffix on coverbs. Synchronically they are clearly a different part of speech from both verbs and coverbs.

fusion (Wilson, 1999), allows the more specific predicate, the coverb, to overwrite the more general predicate, the verb (Section 4.2 discusses the mechanics of this). These two conditions jointly make the prediction that inchoative coverbs may not combine to form complex predicates with stative inflecting verbs. Here is a demonstration:

(98) *Bort-ta ya(ma)-* [$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$],[$_{\text{Id}}$ ([*dead*])])])])]

(99) *Bort-ta yu-nginy* [$_{\text{Event}}$ BE ([$_{\text{Event}}$ BECOME ([$_{\text{Event}}$ BE ([$_{\text{Thing}}$],[$_{\text{Id}}$ ([*dead*])])])])])]

The complex predicate in (98) is faithful to the condition of Wilson (1999) that argument structures of coverbs overwrite that of verbs. It does not violate the constraints of Baker & Harvey (MS) and is therefore well-formed. (99) however, has remained faithful to the same condition of predicate fusion but it has resulted in an argument structure that Baker & Harvey (MS) predicts to be impossible. It has the BE function occurring twice and has BE and BECOME occurring in the wrong order. There is no way for these two predicates, the coverb *bort-ta* 'die' and the verb *yu-nginy* 'be', to merge and satisfy both the conditions on complex predicate formation of the Wilson (1999) model and the Baker & Harvey (MS) model.

5.2.1 Semantic clash

The combination of stative verbs with inchoative coverbs is prohibited. To overwrite an argument structure involving only be with an argument structure involving become in addition to be produces an ill-formed argument structure. It is strictly ruled out by the constraint of Baker & Harvey in (77) b). The constraint is repeated here for clarity.

(100) Predicate functions must appear in the order CAUSE > BECOME > BE

The number of combinations of predicate functions that this order allows is not high. In fact they can be exhaustively listed. Other combinations are proposed to be impossible:

(101)

Simple states:	BE
Changes of state:	BECOME BE
Caused states:	CAUSE BECOME BE
*Stative changes	BE BECOME
*Stative causes	BE CAUSE

Those combinations that do not satisfy the constraint on predicate functions appearing in this order constitute a clash of semantic features. They contain conflicting semantic information and are therefore ill-formed.

I take the function BE as required by BECOME. If there is a BECOME function there is also a BE function. In other words, changes of state are ill-formed if they are not followed by a resultant state. Moreover, where a CAUSE function and a BE function are present, BECOME must also be present. That is, a state cannot be caused without the entity of which it is predicated undergoes a change into that state. With these claims in mind, the template of predicate functions can be rewritten, albeit tentatively, as in (102).

(102) All predicates denoting states or changes of state have the form:

((CAUSE) + BECOME) + BE

Later, chapter 6 will deal with coverbs that do not contain states which clearly are not subject to these conditions. I follow Baker & Harvey (MS) in analysing all non-stative predicates with a MOVE function. That is, all predicates have as their basic semantic operator either BE or MOVE. If they have BE then they class with states and changes of state. If they have MOVE, then they class with actions and motions. Actions and motions, under this analysis, are distinguished by the presence of a path argument and therefore a TO function. The condition on non-stative predicates that corresponds to that for stative predicates in (102) is given below.

(103) All predicates denoting actions or motions have the form:

(CAUSE) + MOVE + (TO)

The use of MOVE to analyse actions and motions, rather than analysing motions as BECOME to BE AT (a place) and actions as DO, for instance, will be discussed in detail in section 6.2. There and in the surrounding sections I will focus on the permissible and impermissible combinations of actions and motions with verbs of different classes.

5.2.1.1 Stative verbs and inchoative coverbs

The Wagiman coverbs *bak-ka* ‘break’ and *bort-ta* ‘die’ are both inchoative coverbs; the lexical representations of their argument structures consist of both BECOME and BE. Each

occurs very frequently in combination with a range of inflecting verbs in forming complex predicates. The inflecting verbs they combine with include *bu-ni* ‘hit’, *ge-na* ‘put’, *ya(ma)-* ‘say/do/become’ and *ya-nggi* ‘go’. They also occur freely and frequently both verbalised, *bak-ka-yi* ‘it became broken’, or nominalised with *ma- -yin*. However, in all collected data involving these two coverbs, complex predicates that combine inchoative coverbs with stative, verbs, either *yu-nginy* ‘be’, *ni-nginy* ‘be’ or *yobe-* ‘stay/be’, are non-existent. This is congruent with the observation of Wilson (1999:102) that ‘[intransitive coverbs of change of state] cannot occur with the ‘stationary’ verbs’.

However there are examples of *bort-ta* occurring in combination with *ni-nginy* ‘sit’ in complex predicates, but they may represent a continuing cline of grammaticalisation. If speakers are presented with a sentence involving *bort-ta ni-nginy* ‘be + become dead’, they reject it.

(104) bort-ta ni-nginy langgarnin-laying munya
die-ASP 3sg.PAST-be-PAST billabong-LOC bottom
“He died there, at the bottom of the billabong” (LM: wag.disc1)

(105) wuji wahan bort-ta ga-yu, wihya
not water die.PERF 3sg.PRES-be no
“That water cannot die, no” (LM: wag.disc1)

Wilson (1999) claims that the complex predicate involving *bort-ta* ‘die’ merging with *yu-nginy* ‘be’ is ungrammatical. Given the frequency of occurrence of *bort-ta* ‘die’ as well as the frequency of the use of stationary verbs in forming complex predicates, it is reasonable to expect the two to combine by chance alone, should there be no linguistic constraints preventing them. That such a combination does not occur – apart from the two examples above – indicates that the assessment made by Wilson (1999) is correct. Inchoative coverbs cannot combine with stative verbs to form merger complex predicates.

The two examples for which this does not hold, (104) and (105), can be accounted for if the verbs *yu-nginy* and *ni-nginy*, both of which mean ‘be’, are taken to operate as auxiliaries. Section 3.2.1.1 identifies a cline of grammaticalisation that indicates that *yu-nginy* and *ni-nginy* are becoming auxiliaries. Currently they are still light verbs and have predicate information in the LCS that prevents them from occurring with changes of state such as *bort-ta* ‘die’ in these two instances. These inflecting verbs do occur as auxiliaries in simplex predicates, they convey only tense and agreement and convey no other meaning. Perhaps, at some future stage of the language, the historical stance verbs, *yu-nginy* ‘be’ and *ni-nginy* ‘be’

will be complete auxiliaries, able to combine with every coverb. Now though, they are still constrained by their semantic content.

5.2.1.2 States and actions

Actions present a difficult issue for this analysis of predicate formation. There are a number of coverbs of action that may not merge with *yu-nginy* 'be' since, as Baker & Harvey (MS) predict, the coverb of action and the stationary verb contain incompatible semantic information. *Wangirrk-ka* 'sink' is attested in natural speech only in combination with the verb *ya-nggi* 'go', as in (106).

(106) warren gahan wangirrk gu-ya
child that sink.PERF 3sg.FUT-go
"That child might drown (lit. sink)" (LL: AW_0025)

The verb *ya-nggi*, when it occurs as a main verb and not a semantically bleached, light verb, is understood as a motion verb with the meaning 'go'. However it may also occur as a light verb in which case it loses the component that denotes motion and is instead understood to mean 'do for a long time'. This multiplicity of lexical entries means that coverbs that are attested freely only with *ya-nggi* cannot be conclusively classified as to their predicate type. *Wangirrk-ka* 'sink' is, however, rejected as ungrammatical when combined with the verb *yu-nginy* 'be':

(107) AW: "Wangirrk-ka ga-yu"
sink-ASP 3sg.PRES-be

LL: "Wangirrk-ka ga-yu? Nah!" (LL: AW_0025)

Another coverb that behaves in this manner is *dolp-pa* 'drop'. It freely combines with verbs that denote the physical motion such as *linyi-ra* 'fall', but is unable to combine with *yu-nginy* 'be':

(108) AW: "dolp-pa ga-yu"
drop-ASP 3sg.PRES-be

LL: "No, makes no sense." (LL: AW_0025)

These are correctly predicted to be impossible. According to Baker & Harvey (MS) the reason behind their being ill-formed is the clash of semantic features that results from the merger of a coverb of action with a stative verb. Both *dolp-pa* 'drop' and *wangirrk-ka* 'drown/sink' contain MOVE as their basic semantic operator. The verb with which they are combined in these constructed examples, *yu-nginy* 'be' is a stative verb with an argument structure consisting of BE. The functions BE and MOVE are predicted not to allow combination.

However there are also a number of coverbs that do frequently and naturally occur in combination with *yu-nginy*. Examples include *dabulp-pa* 'smoke' and *jamh-ma* 'eat', as illustrated below.

(109) dabulp-pa ga-yu bakka
smoke-ASP 3sg.PRES-be tobacco
"He's smoking tobacco" (JH: AW_0029)

(110) menuny jamh-ma ga-yu nung-gin lagiriny
maybe eat-ASP 3sg.PRES-be 3sg-GEN tail
"Maybe (that dog) gonna eat his own tail" (HL: AW_0020)

(111) wumbirrh-ma ga-yu nu-naw-ma gahan labingan
make noise-ASP 3sg.PRES-be lots that baby
"That baby is making a lot of noise" (JH: AW_0026)

Clearly, the events denoted by these coverbs are not states. Therefore they do not contain the predicate function BE. Rather they contain MOVE, which, as discussed in section 5.2.1, is the case for actions as well as motions. The reason that the functions be and move are allowed to combine to form a complex predicate with an overall meaning represented by simply move is discussed in the section on predicate fusion, 4.2, and has to do with the lack of any other verb in Wagiman that may denote an activity that is otherwise unmarked. In this respect *yu-nginy* 'be' demonstrates functions that class it as an auxiliary.

Combinations of this type will be the focus of section 5.2.1.2 and will not be discussed in detail here. The difference between those coverbs that are rejected in combinations with *yu-nginy* 'be' such as *dolp-pa* 'drop' and *wangirrk-ka* 'sink', and those that occur naturally combined with *yu-nginy*'be', such as *dabulp-pa* 'smoke' and *wumbirrh-ma* 'make noise', is that the former all contain a path argument and therefore a TO function. *Wangirrk-ka* 'sink', for instance, contains the specification [$_{\text{path}}$ TO ([*under water*])]. However those that combine with *yu-nginy* 'be' do not require a path, in fact they never occur with a path. This is shown in

chapter 6 to be a significant analytical distinction between these types of predicates and may account for the differences in combinatorial possibilities.

5.2.2 Summary

The empirical evidence clearly shows a structural difference between certain types of coverbs in Wagiman that manifests in multiple areas of the syntax. Firstly, there is a distinction between coverbs as to which nominalise using the circumfix *ma- -yin* and which nominalise with the prefix *nu-*. The same distinction relates also to identifying the verbs with which these coverbs combine. Inchoative coverbs do not combine with stative verbs. Other generalisations of this type are similarly drawn on the basis of the predicate functions an argument structure contains. Motions, for instance, coverbs that contain a MOVE function and a TO function, are not permitted to combine with states due to the semantic clash between the predicate functions BE and MOVE. These generalisations are the logical outcome of assuming both the Wilson (1999) model of predicate fusion and the Baker & Harvey (MS) constraints on predicate fusion. Empirical data from the rejection of such forms is in accordance with these predictions. Predicates cannot be combined using the Wilson (1999) model of predicate fusion where the resulting argument structure is of a form that violates the Baker & Harvey (MS) constraints on predicate composition.

6 BE and MOVE predicates

Chapter 5 discussed the possible and impossible combinations of coverbs that have a state as a part of their semantics with various inflecting verbs. The coverbs discussed were mainly inchoatives and states. This section broadens the analysis to take into account the other two types of predicates in Wagiman. These are Actions and motions.

The basic division between the inchoatives and statives on one side and actions and motions on the other is whether the basic function in the semantic representation is BE or MOVE. Those that have BE, the states and the inchoatives, are called 'stative' here for convenience. They contrast with the so-called 'active' predicates that contain MOVE as their basic function. Stative predicates, as section 5.1 discussed, are divided into states that take only the predicate function BE, and inchoatives that have BECOME in addition to BE. The active predicates are similarly subdivided. Those that have take a path argument, or a TO function (see section 6.2.1 below), are motions, whereas those that do not, those that are stationary with respect to location, are actions. There are also manner of motion coverbs that optionally take a path. These formal distinctions are summarised below in a table.

Predicates	Stative	BE	BE	States
			BECOME BE	Inchoatives
	Active	MOVE	MOVE	Activities
			MOVE TO (oblig.)	Motion
			MOVE TO (opt.)	Manners of motion

This section looks at the combinatorial possibilities of active predicates, those containing a MOVE-function, with various verbs. The Baker & Harvey (MS) model will be adapted slightly to accommodate the empirical data that relates to actions and motions in combination with stative and motional verbs.

Under the constraints proposed by Baker & Harvey (MS), the verb *yu-nginy* 'be' should only allow merger with stative predicates. However, as pointed out in section 5.2.1.2, *yu-nginy* 'be' also allows merger with predicates that can only be described as actions. Conversely, verbs of motion such as *di-nya* 'come', are not able to occur with these same coverbs denoting actions.

This section proposes that a crucial characteristic in determining the combination of verbs and coverbs is the presence of a path argument in the event structure[13]. Coverb and verbs must be compatible with one another with respect to their specification of a path. If they contain contradictory information, the combination will be ill-formed.

6.1 The data

An analysis of the verb *yu-nginy* 'be' in the terms proposed by Baker & Harvey (MS) cannot adequately explain the range of coverbs with which this verb combines. Given the proposed constraints operating on predicate formation, the verb *yu-nginy* 'be', which contains only a BE function should only allow combination with states. However a quick survey of the data shows that *yu-nginy* 'be' occurs with many predicates other than states. The activity coverb *Dabulp-pa* 'smoke', for instance, occurs frequently in natural speech combined with *yu-nginy* 'be'.

(112) dabulp-pa ga-yu bakka
smoke-ASP 3sg.PRES-be tobacco
"He's smoking tobacco" (JH: AW_0029)

One possible way to address this issue is to conclude that, since the Baker & Harvey (MS) model only allows *yu-nginy* 'be' to occur with states, anything that is attested occurring with *yu-nginy* 'be' is a state. Analysing *dabulp-pa* 'smoke' to be a state mitigates the problem that it poses for Baker & Harvey (MS). However, accepting that all predicates of this type are states, including *wirnh-na* 'whistle', *gartgart-ta* 'laugh' and *bongorrk-ka* 'snore', is not likely to be a popular view. Clearly they are best described as activities.

Another way around this problem is to treat *yu-nginy* 'be' as an auxiliary; a syntactic head with no semantic content. This analysis would allow it to combine with all coverbs. This too, is wrong, as *yu-nginy* is not able to combine with coverbs that denote motion, such as *liri-ma* 'swim' and *durdurt-ta* 'run'.

The coverbs with which *yu-nginy* 'be' combine must form a natural class discernable from those with which it cannot combine. Otherwise *yu-nginy* 'be' might simply be seen as an irregular verb. A survey of all different coverbs representing the various types of predicates, and the permissibility of their combinations with a sample of the verbs is given in sections

[13] Path arguments are those that, in the event structure look like [$_{Path}$ TO ([*place*])]. Note that it contains also a TO predicate function. The notions 'path argument' and 'TO function' are simply different notational variants of the same entity.

6.1.1 through 6.1.3. It will be shown that a natural class of predicates does emerge and that generalisation can be drawn on the basis of this natural class to predict other combinatorial possibilities.

As with stative and inchoative predicates in the previous section, Jackendovian semantic primitives will be used to represent these predicates. However the analysis of actions and motions in this section will diverge from Jackendoff (1990) in some crucial respects. These divergences are addressed below in section 6.2.

6.1.1 Motion coverbs

The coverb *durdurt-ta* 'run' freely combines with verbs of motion like *ya-nggi* 'go' and *di-nya* 'come', but never with a stative verb *yu-nginy* 'be'. Classing it as a coverb of motion accounts for the possible and impossible combinations. These are shown in (113).

(113) *Durdurt-ta ya-nggi* 's/he ran/ran away'

Durdurt-ta di-nya 's/he ran here'

**Durdurt-ta yu-nginy* *'s/he is running'

Other coverbs describing motion along a path show the same distribution. They may combine with the motion verbs *di-nya* 'come' and *ya-nggi* 'go', but never with a stationary verb such as *yu-nginy* 'be'.

6.1.2 Action coverbs

There are a number of coverbs that have a different distribution. *Wirnh-na* 'whistle' for instance, is able to combine with both *ya-nggi* 'go' and *yu-nginy* 'be' and both combinations are translated as 'whistle'. However *wirnh-na* is unable to combine with *di-nya* 'come' in a complex predicate meaning 'come whistling'.

(114) *Wirnh-na ya-nggi* 's/he whistled/*went along whistling'

Wirnh-na yu-nginy 's/he whistled'

**Wirnh-na di-nya* *'s/he whistled here/came here whistling'

Coverbs of this type are actions and are formally identified by the presence of the MOVE function but the absence of a path argument.

Other coverbs that behave in this manner include *dabulp-pa* ‘smoke’ and *bongorrk-ka* ‘snore’. These examples are problematic for the Baker & Harvey (MS) model of predicate formation; since their ability to combine with *yu-nginy* ‘be’ is strictly ruled out if they contain anything besides a BE-function. Yet to analyse *wirnh-na* as meaning ‘be in a whistling state’ is incorrect. These are activities and not states. The semantic model that accounts for the combinations of these activity coverbs with verbs must adequately address their frequent merger with *yu-nginy* ‘be’.

6.1.3 Manner of motion coverbs

There are also a number of predicates that are able to combine with all three of these verbs. Most members of this sub-class of coverbs denote sounds such as *lurr-ma* ‘thunder’ or *ginkin-na* ‘roar’. However there are a small number of coverbs that denote actions that may take paths. An example is the coverb *warratj-ja* ‘dance (of women)’. It is frequently attested merging to form complex predicates with all three verbs *ya-nggi* ‘go’, *yu-nginy* ‘be’ and *di-nya* ‘come’. However, there is a slight meaning difference between the complex predicate containing ‘come’ and that containing ‘be’.

(115) *Warratj-ja ya-nggi* ‘she danced/went dancing’

Warratj-ja yu-nginy ‘she danced’

Warratj-ja di-nya ‘she came dancing’

The meaning difference is the required presence of a path ‘hither’ in ‘come dancing’, whereas ‘be dancing’ requires that there is no path. So, *warratj-ja di-nya* will allow an overt path argument such as *mayh-ga* ‘to here’, but *warratj-ja ga-yu* will not allow it:

(116) *warratj-ja yu-nginy mayh-ga
dance-ASP 3sg.PAST-be-PAST here-ALL
*“She danced here’

Warratj-ja ya-nggi ‘go dancing’ allows an overt path but does not require one. When an overt path is given, the complex predicate necessarily has a motion reading and the verb *ya-nggi* ‘go’ is functioning in its full capacity.

6.1.4 Summary

The three verbs *ya-nggi* ‘go’, *yu-nginy* ‘be’ and *di-nya* ‘come’ belong to three different classes of predicate. *Di-nya* ‘come’ always specifies a path argument. Furthermore, this path argument is always represented as [$_{\text{Path}}$ TO ([*here*])]. On the other hand, *yu-nginy* ‘be’ always disallows a path argument. Entities of which *yu-nginy* ‘be’ is predicated must be stationary with respect to location. Finally, *ya-nggi* ‘go’ may optionally contain a path argument. This option is due to the multiple lexical entries of *ya-nggi* ‘go’. It may occur as a main verb in simplex predicates or complex predicates in which it contains the argument [$_{\text{Path}}$ TO ([$_{\text{Place}}$])]. Otherwise it may occur as a light verb in which this argument is no longer present. In the case of the light verb, it conveys the extra meaning ‘do for a long time’ rather than ‘go’.

6.2 The MOVE-function

The basic dichotomy of predicate-hood that I appeal to here is between stative predicates that have BE as their main function, and active predicates that have MOVE. All predicates that do not have BE as their basic function are analysed here as containing the function MOVE. In other words, MOVE and BE are in complementary distribution.

This diverges from the Jackendovian analysis of predicate types (Jackendoff 1990:88). According to Jackendoff, stative predicates take the functions BE AT, actions and manners of motion have a MOVE-function and motional predicates have the functions GO TO. Since a large number of predicates can denote both action and motion, the functions MOVE and GO TO are allowed to combine.

This is the case for the analysis of manner of motion verbs in English such as ‘dance’ as in *she danced into the room* Jackendoff (1990:88). As it contains both the action ‘dancing’ and the motion ‘(go) into the room’ it is analysed as containing the predicate functions that are otherwise ascribed to these different predicate types; MOVE and GO TO. Thus, under Jackendoff (1990), a verb phrase such as *dance into the room* will have the argument structure given in (117).

(117) [$_{\text{Event}}$ MOVE ([*dance*]) ([$_{\text{Event}}$ GO ([$_{\text{Thing}}$],[$_{\text{Path}}$ TO ([$_{\text{place}}$ ([*room*])])])])]

I hold that the inclusion of both event predicate functions MOVE and GO in order to semantically deconstruct a single conceptual event is mistaken. Since each of the functions MOVE and GO otherwise denote fully independent events – actions and motions respectively – combining them to describe manners of motion implies that such events are composed of two

distinct conceptual events. It implies that *dance* and *(go) into the room* are separate, simultaneous events. This may be the case for English as they are segmentable. But with respect to Wagiman complex predicates, which are always formed by the merger of two independent elements, the manner of motion predicates are *no more segmentable* than simple actions or simple motions.

6.2.1 The Path-argument

The path argument, as I have been labelling it, may be a complex argument composed of other elements. All instances here contain the function TO, but it is conceivable that the path consists of other functions instead. *Leave* for instance, as in *leave the room* may consist of a path argument represented by [$_{\text{Path}}$ FROM ([$_{\text{place}}$ IN ([$_{\text{Thing}}$ ([*room*])]). Yet, it is possible, given the allowable arguments and functions used by Jackendoff (1990), to construe path arguments in a number of ways. For instance, the path in the above example *leave the room* may also be represented by [$_{\text{Path}}$ TO ([$_{\text{Place}}$ *NOT*-IN ([$_{\text{Thing}}$ ([*room*])])])], provided the polarity particle *not* can be considered primitive[14]. These complex path arguments can be equally represented using different semantic operators. I will adopt a convention of representing all paths as complex arguments consisting of a function TO and a simplified place in parentheses. Thus the path argument in *wangirrk-ka* 'sink' is represented as [$_{\text{Path}}$ TO ([$_{\text{Place}}$ ([*under water*])])] rather than as a needlessly complex expansion in terms of primitives. This is a notational choice.

Active predicates, both actions and motions, are analysed as containing the MOVE function. The formal difference between 'walk' and 'smoke' is simply the presence or absence of a path argument. While 'walk' requires a path argument, 'smoke' never takes one.

(118) He walked to the river

He smoked (*to the river)

According to Jackendoff (1990) the difference between these two is that 'walk' is a GO-TO-predicate while smoke is a MOVE-predicate. I class them all as MOVE-predicates and hold that the crucial difference is that *walk* lexically specifies [+path]. Thus 'walk' has an argument structure in (119)[15] and smoke has an argument structure in (120).

[14] Such a use of semantic primitives like *NOT* may also provide a basis for formalising the negative specification of a path argument. This could be part of further research.
[15] Instances of *walk* that does not contain an overtly realised path still contain an implicit path.

(119) ‘walk’ [Event MOVE [*walk*] ([Thing], [Path])]

(120) ‘smoke’ [Event MOVE [*smoke*] ([Thing])]

There also exist a number of predicates that may optionally take a path argument. ‘Dance’ as discussed above, is one of these.

(121) She danced (into the room)

Dance contains a MOVE-function much like other actions and motions. The difference though, is that it is unspecified for a path argument. That is, both the presence and absence of a path argument will satisfy its lexical specifications. It may occur either without a path argument, as in *she danced*, or with a specified path argument, as in *she danced into the room*. Under a Jackendovian analysis, the former contains only a MOVE function whereas the same sentence with an added *into the room* contains not only MOVE, but also GO (TO).

6.2.2 Summary

The formalism of Jackendoff (1990) has been adopted here, though some formal and notational alterations have been made. Firstly, the fundamental dichotomy of predicate types is taken to be stative predicates on one side and active predicates on the other. The former are represented lexically by the function BE while the latter are represented by MOVE. Each type can then be subdivided. Stative predicates are subdivided by the inclusion of a BECOME function for inchoatives, while its absence marks simple states. The active predicates are subdivided into activities that have only MOVE and motions that have both MOVE and TO.

I motivate this on the basis that action versus station is a psychologically salient dichotomy. In both states and inchoatives the undergoer need not do anything. Whereas both activities and motions require the agent to *move*, the only difference being the change of location for motions.

7 Semantically possible combinations

In Wagiman the main distinction between predicate types is whether the argument structures contain BE or move as the primary function. Predicates that have a BE function as their basic operator are either inchoatives or statives, and predicates that have MOVE are either actions or motions. The possible combinations of argument structures for actions and motions can be surmised as in (122), and those for stative predicates in (123). It should be noted that the inclusion of a cause function means that the entire predicate is no longer stative, it merely contains a stative predicate.

(122) Non-stative predicates (CAUSE) MOVE (TO)

(123) Stative predicates ((CAUSE) BECOME) BE

The generalised predicate templates in (122) and (123) generate the following possible structures:

(124)

Actions	MOVE
Motions	MOVE TO
Caused actions	CAUSE MOVE
Caused motions	CAUSE MOVE TO
States	BE
Inchoatives	BECOME BE
Caused inchoatives	CAUSE BECOME BE

The parentheses around CAUSE and BECOME indicate that if cause is present with BE, then BECOME must also be present. That is, it conveys the semantic impossibility of causing a state without causing the dynamic change into that state. Moreover, BECOME cannot occur without a resultative state BE. This last condition is stipulated to be universally true; inchoative predicates universally require resultative states. These conditions restrict the number of allowable combinations of argument structures in state-based predicates to the three listed above. Moreover, they are restricted by these conditions to the order identified by Baker & Harvey (MS) (discussed in 4.3.2.2).

There are a number of predicates that contain all three active functions, such as *berrh--ma* ‘throw’, *jowk-ka* ‘send’ and even, under certain analyses, *jamh-ma* ‘eat’, though this is dubious. Certainly ‘throw’ and ‘send’ contain all three functions, as illustrated in (125).

(125) Berrh-ma ‘throw’ [$_{\text{Event}}$ CAUSE ([$_{\text{Thing}}$], [$_{\text{Event}}$ MOVE ([$_{\text{thing}}$], [$_{\text{Path}}$ TO ([$_{\text{place}}$])])])]

However the possible combinations they allow are restricted. *Berrh-ma* ‘throw’ is only attested with the verb *la-ndi* ‘throw’, which consists of an identical LCS and does not contributing any extra meaning. Jowk-ka ‘send’ allows more combinations than just *la-ndi* ‘throw’. It allows combination with *ya-nggi* ‘go’, *bu-ni* ‘hit’ and *ge-na* ‘put’.

One aspect of these argument structures that must be addressed is the possibility of an event containing CAUSE and MOVE but not TO; those listed in (124) as caused actions. There are no examples of any Wagiman predicates – either simple or complex – that denote causatives of actions. *Gartgart-ta* ‘laugh’ is an example of an action that occurs with *yu-nginy* ‘be’, but is unattested in a causative form, ‘cause to laugh’, with any inflecting verb. Yet the event described in semantic terms by *cause to laugh* is not an unlikely possibility. To cause someone to perform an action is not an event that is psychologically unrealistic.

English *laugh* is, under this analysis, treated as MOVE [*laugh*]. A causative of *laugh*, for instance *crack (someone) up*, would then be treated as CAUSE to MOVE [*laugh*]. It is true that *crack up* is not a monomorphemic verb root but a phrasal verb instead. However I take it to be equally as monopredicational as other English phrasal verbs such as *blow up*. Thus, under the Baker & Harvey (MS) model of predicate formation, these forms of phrasal verbs in English will too class with merger complex predicates and monomorphemic verb roots.

That Wagiman doesn’t have causatives of actions while English does represents a problem for this analysis as it is hypothesised to apply to semantic representation of unitary conceptual events universally. Though, it may be the case that Wagiman has a language-specific condition on causatives and actions that prohibits these forms[16]. In any case, caused actions are included in the list of possible combinations of the relevant semantic primitives given in (124). There is not enough data to conclusively say whether or not they are possible in Wagiman.

7.1 Three types of MOVE

From the range of data that is summarised in section 6.1, three sub-types of coverbal predicates can be identified on the basis of the presence or otherwise of the path-argument. The motion coverbs are lexically specified as containing a path argument. The action coverbs

[16] Wagiman has a general restriction on causation; that it may only be direct. The following is an impossible set of events unless the car hit the man too:
*that car killed that dog / that man cried for his dog / *that car made that man cry*
Whether this restriction is related to the non-occurrence of caused actions is unclear.

do not contain a path function. Finally, those in the middle for which a path function is allowed but not required, are labelled the manner of motion coverbs. They are neither inherently motional nor inherently active. Rather they display properties of each class.

7.1.1 Actions without paths

Verbs and coverbs that disallow paths and contain MOVE as their basic function are here called the active class of predicates. All coverbal members of this class allow merger with the stationary verbs *yu-nginy* 'be', *ni-nginy* 'be' (an idiolectal variant) and *yobe-* 'stay'. However they also allow combination with the verb *ya-nggi* 'go'. In the case of combining with *ya-nggi* 'go', the verb is operating as a light verb and no longer means 'go' but rather means 'do for a long time'. This is evidenced by the fact that complex predicates containing *ya-nggi* in combination with coverbs of this class may not take an overt path or allative-marked argument.

(126) wah-garang ga-ya jorro-ma, bakka dabulp-pa ga-ya
water-COM 3sg.PRES-go return-ASP tobacco.ABS smoke-ASP 3sg.PRES-go
"He's going back drunk, he's smoking" (JH: AW_0029)

(127) *dabulp-pa ga-ya bakka bora-ga
smoke-ASP 3sg.PRES-go tobacco.ABS river-ALL
*"He is tobacco-smoking his way to the river"

In example (126) the first clause is motional, as it contains a necessarily motional coverb *jorro-ma* 'return', while the second contains the light verb *ya-nggi* 'go' but is not a motion. It shows that while the event of smoking and the event of moving can occur simultaneously, as the context of this example required, they may not be represented in a monopredicational linguistic structure.

The opposition of coverbs of this class to motional coverbs is evidenced by *bornh-na* 'bogey/swim about' and *liri-ma* 'swim'. The former is an action that does not take a path whereas the latter is always motional; it must take a path and as such, may not occur with *yu-nginy*.

(128) ga-ba-yu bornh-na
3pl.PRES-be bogey-ASP
"They were having a bogey" (LL: AW_0022)

(129) murrkkun yarrulan-giwu, bornh ba-ya-nginy wah-leying

three young man-PL bogey.PERF 3pl.PAST-go-PERF water-LOC
"Three young men bogeyed at the water" (LL: AW_0022)

(130) liri-ma ga-di-n, mayh-ga
swim-ASP 3sg-come-PRES here-ALL
"(That dog) is swimming here" (LL: AW_0031)

(131) *liri-ma ga-ba-yu
swim-ASP 3pl.PRES-be
*"He is swimming"

(132) *bornh-na ga-di-n mayh-ga
bogey-ASP 3sg-come-PRES here-ALL
*"He is bogeying this way"

The coverb *bornh-na* 'bogey' is an active predicate and as such, does not take a path argument. In combining with a verb, the absence of a path argument in its LCS will delete any path argument in the LCS of the verb (See section 4.2 for an explanation of the mechanics behind this). *Liri-ma* 'swim' on the other hand, is a motion predicate and can therefore not occur without an implicit path. Both have similar propositional content, that is, they are predicated of objects or people who are *in water*. The semantic distinction between swimming in a stationary location and swimming with the purpose of moving is sufficient to differentiate these coverbs into different classes.

7.1.2 Motions with paths

Coverbs and verbs that require a path as a part of their lexical specification are motional predicates. The only verb that necessitates a path in all occurrences is *di-nya* 'come'. It lexically specifies the argument [$_{\text{Path}}$ TO ([*here*])] in every instance. *Ya-nggi* 'go' has two lexical entries; one of which is necessarily motional. The lexical entry for *ya-nggi* 'go' as it occurs in these instances, contains an argument that can be represented by [$_{\text{Path}}$ TO ([$_{\text{Place}}$])]. Otherwise, *ya-nggi* 'go' may be used as a light verb that carries the meaning 'do for a long time'. In this case it does not contain a path argument and may therefore combine with coverbs that are not from the motional class.

The class of motion predicates includes coverbs such as *durdurt-ta* 'run', *wilh-ma* 'walk', *werr-ma* 'emerge (into sight)' and *dabale-ma* 'go around', all of which frequently combine with *di-nya* 'come' and *ya-nggi* 'go', but never with *yu-nginy* 'be'.

(133) ngurrugun ga-di-n werr-ma
sunny weather 3sg-come-PRES emerge-ASP
"Sunny weather is coming out" (HL: AW_0020)

(134) gajirri magu ga-di-n wilh-ma
girl that 3sg-come-PRES walk-ASP
"The girl there is walking here" (LL: AW_0021)

(135) ya-nggi magu derreh-ma
3sg.PAST-go-PAST there crawl-ASP
"He crawled that way" (LL: AW_0024)

(136) *wilh-ma ga-ba-yu
walk-ASP 3pl.PRES-be
*"They are walking"

Moreover, evidence from verbalisation supports their class membership as motions. All instances of these coverbs being verbalised involved motion along a path. Therefore the path is an inherent component of the bare coverb. Conversely, the verbalised form of an action coverb may not take a path. The sentences below illustrates this.

(137) ga-ba-nornh-na-n
3pl.PRES-go in line-ASP-PRES
"They're going along in a line, that mob" (JH: AW_0023)

(138) ga-ba-burrh-ma-n nardal
3pl.PRES-slap hands on thighs-ASP-PRES hand
"They are slapping their hands on their thighs, big mob" (LL: AW_0034)

(139) *ga-ba-burrh-ma-n mahanan
3pl.PRES-slap hands on thighs-ASP-PRES this way
*"They are slapping their hands on their things coming this way, big mob"

Verbalised coverbs encode the same information regarding the presence or absence of a path as the unmarked coverbal counterparts. That is, coverbs that combine with motional verbs like *ya-nggi* 'go' and *di-nyi* 'come' but are unable to combine with *yu-nginy* 'be' have verbalised counterparts that are inherently motional. Conversely, coverbs that combine with the stative verb *yu-nginy* 'be' and *ya-nggi* where it means 'do for a long time' but may not combine with the motion verbs *di-nya* 'come' or *ya-nggi* 'go' have verbalised counterparts that are inherently activities.

Efforts to force coverbs of motion into merger complex predicates with a stative verb such as *yu-nginy* 'be' elicited rejections. The constructed examples that the speakers heard were often corrected immediately. That is, the whole sentence was repeated with the appropriate inflection of *ya-nggi* 'go' used instead of *yu-nginy* 'be'.

(140) AW: Can I say "dabale-ma ga-yu"?

(141) LL: No. "Dabale-ma ga-ya". (JH: AW_0023)

The combination of *yu-nginy* 'be' and *dabale-ma* 'go around' is not a usual real-world situation, and this would explain why it has not occurred in natural speech. However, it is not simply a matter of real world plausibility. When presented with situations involving motion coverb in combination with a state, speakers instead gave structures involving a derived form of the coverb; either a nominalisation or using a continuous-marked coverb. An example is given in (142). Speakers never combined motion coverbs with stative verbs to describe any event.

(142) wilh-ma-yan ga-yu ngutjjurh-ma
walk-ASP-CONT 3sg.PRES-be cough-ASP
"He's walking here, coughing" (JH: AW_0029)

There are no examples of unmarked coverbs of motion in combination with verbs denoting states. Coverbs that are lexically specified as involving a path argument may not combine with a verb that does not allow motion along a path. *Yu-nginy* 'be' and the other stationary verbs do not permit paths. As a result, constructed examples in which a path-taking coverb is forced into a merger with a stationary verb are rejected.

7.1.3 Manner of motion coverbs – Actions with paths

The final class of predicate is formally identified by the optional presence of a path function. What determines the presence of the path is whether or not the verb that combines with them to form a complex predicate requires a path. These coverbs will take a path when combined with a path-taking verb like *di-nya* 'come', for instance, but will not be able to take a path when combined with one of the stationary verbs, such as *yu-nginy* 'be'. If however, the coverb is combined with *ya-nggi* 'go', which may or may not take a path, then context serves to denote the presence or absence of such a path. Coverbs conveying sound, like

wumbirrh-ma ‘make noise’, *lurr-ma* ‘thunder’ or *ginkin-na* ‘roar’, comprise the bulk of this class. They may be used in reference to motion, as in (143) or (144), or a stationary argument, as in (145).

(143) wahan buluman ga-di-n ginkin-na
water big 3sg-come-PRES roar-ASP
“A lot of rain coming here roaring” (LL: AW_0028)

(144) wahan buluman lurr-ma ga-di-n
water big thunder-asp 3sg-come-PRES
“Big rain thundering this way” (LL: AW_0014)

(145) wumbirrh-ma ga-yu nu-naw-ma gahan labingan
make noise-ASP 3sg.PRES-be lots that baby
“That baby makes too much noise” (JH: AW_0026)

There is also a small number of coverbs that denote canonical actions but may also take paths. *Warratj-ja* ‘dance (of women)’ and *bornhborn-na* ‘dance (of men)’ are included in this class because they may apply either to motion, ‘dancing this way’, or to activity that is static with respect to location, ‘dancing on the spot’. The reason that this activity alone is allowed to combine with both stative and motional verbs is due to the fact that traditional dancing often occurred in either a stationary location or a dynamic, changing location.

(146) Bornborn-na ga-di-n
Dance-ASP 3sg-come-PRES
“He’s coming here dancing” (JH: AW_0023)

(147) Bornhborn-na ga-ba-yu
Dance-ASP 3pl.PRES-be
“They’re dancing, that big mob” (JH: AW_0023)

No other coverb that conveys an activity is allowed to combine with both *yu-nginy* ‘be’ and *di-nya* ‘come’. These two coverbs, *warratj-ja* and *bornhborn-na*, both of which describe dancing, imply that cultural practices can affect linguistic structures. So, if running on the spot for example, was an activity performed often enough to become culturally salient, it would be described by the combination of *durdurt-ta* ‘run’ and *yu-nginy* ‘be’.

7.1.4 Coverbs as adjuncts

Recall that chapter 3 introduced complex predicates and discussed the possibility of coverbs occurring as sentential adjuncts. That is, these coverbs do not combine with inflecting verbs at the level of argument structures to form complex predicates. They remain syntactically and semantically independent units.

(148) Gahan lagiban wilh-ma ga-di-n jamh-ma danganyin
That man walk-ASP 3sg-come-PRES eat-ASP tucker
"That bloke is walking here eating" (LL: AW_0017)

(149) Ngi-ga-ndi-guju magu wurnhwurn-na
1pl-take-PAST-DUAL that way carry.on.back-RDP-ASP
'We took it that way, on our backs' (LM: tx 18)

(150) bewh-ma ga-bu-n boran, liri-ma, gahan lamarra
cross-ASP 3sg-hit-PRES river swim-ASP that dog
"That dog is crossing the river, swimming" (JH: AW_0018)

These structures denote separate though simultaneous events. Sentence (148) represents two events. The first is represented by a complex predicate *wilh-ma ga-di-n* 'he walks here' and comprises of a motional coverb *wilh-ma* 'walk' and a verb of motion *di-nya* 'come' that specifies the argument [$_{\text{Path}}$ TO ([*here*])]. The second event is expressed by a bare coverb *jamh-ma* 'eat' and the argument *danganyin* 'tucker'. Crucially, the events *come walking* and *eating* are simultaneous, yet they are not expressed using a complex predicate that combines *jamh-ma* 'eat' and *di-nya* 'come'.

Sentences that denoted concepts such as this were elicited multiple times. A complex predicate consisting of a non-derived coverb immediately followed by a motion verb, thereby combining activity with motion, was never recorded in these instances.

7.1.5 Summary

It is crucial that the presence of a path argument in the event structure of predicates is what restricts the possible combinations of active coverbs with verbs. In other words, active coverbs and verbs must agree as to their specification of the presence of a path. If there is a contradiction of information, if the coverb specifies a path while the verb disallows one or vice versa, then the combination is ill-formed and ungrammatical.

If an element does not specify either the presence or absence of a path, then it may optionally take one and is not prevented by the path condition stipulated in these sections from combining with either path-taking or path-refusing predicates.

The way in which speakers naturally construct sentences that contain two predicative elements that cannot combine is by using a bi-predicational structure. These may take many forms. A complex predicate followed by a coverb acting as a sentential adjunct is a common structure. Another common structure is a simplex predicated followed immediately by a sentential adjunct, which looks very similar to a canonical complex predicate, although the order of the constituents is reversed.

Speakers never naturally combined activity coverbs with motion verbs in complex predicates. The structure prohibits the combination of these types of predicates.

7.2 Constructed examples of actions and motions

Coverbs that combine coverbs of activity with verbs of motion are predicted from the Baker & Harvey (MS) model of predicate formation to be ill-formed. The reason they are ill-formed is that they combine a predicate that inherently requires a path function, a motional verb, with a predicate that does not contain a path function, a coverb of activity. However, stative verbs combining with inchoative coverbs are ungrammatical because there is a clash of semantic primitives during merger.

The two different types of ill-formed complex predicates elicit different responses. The constructions combining stative verbs with inchoative verbs elicit clear rejections, while the forms that combine activity coverbs with motion verbs, the prime focus in this section, do not elicit rejections. Rather, they are accepted as meaningful but are otherwise never produced in natural speech or elicitation.

7.2.1 Interpretation

While combinations of activity coverbs with motion verbs are ill-formed, they are not rejected in the same way as the combinations discussed in 5.1 that involved a direct clash of semantic features.

(151) AW: Can I say “dabale-ma ga-yu”?
Go around-ASP 3sg.PRES-be

LL: No. “Dabale-ma ga-ya”.
Go around-ASP 3sg.PRES-go (JH: AW_0023)

(152) AW: wirnh-na ga-di-n
whistle-ASP 3sg-come-PRES

LL: That mean "He's coming here whistling". (LL: AW_0031)

The sentence in (151) shows the clear and immediate rejection of a motion coverb *dabale-ma* 'go around' combined with a stative verb *yu-nginy* 'be'. The entire predicate is then repeated with the verb replaced by one that denotes motion, *ya-nggi* 'go'.

The sentence in (152), however, elicits a different evaluation from speakers. Sentences such as these are interpreted as meaningful utterances and back-translated. However, the grammaticality of sentences of this form is doubtful. Firstly, they are never produced naturally and secondly, asking speakers to immediately repeat a constructed example that had been evaluated as grammatical elicits a derived form of the coverb or a word order that is consistent with a bi-predicational structure.

7.2.2 Non-production

The forms that are given in response to elicitations such as *he is coming this way whistling* or *he is whistling all the way here*, involve either derived forms of the coverb or the non-canonical word order in which verb is followed by coverb. Sentences involving derived forms of the coverb are discussed in 7.2.2.1 and those involving the non-canonical word order in 7.2.2.2. Complex predicates involving underived coverbs of activity in combination with verbs of motion combined in the canonical complex predicate word order do not occur.

7.2.2.1 Derived coverbs

While derivations of coverbs, such as reduplication or the continuous form using *-yan*, may still combine to produce complex predicates[17], these complex predicates are not subject to the same constraints as those formed using the underived coverb. Derived coverbs are able to combine with verbs to form clauses of a bi-predicational structure that denote two separate, simultaneous events.

(153) wirnhwirn-na ga-di-n
whistle-RDP-ASP 3sg-come-PRES
"He comes here whistling" (LL: AW_0031)

[17] There is not enough data to conclusively say what the function of such derivations as *-yan* are.

(154) jamh-ma-yan ga-di-n, lamang,
eat-ASP-CONT 3sg-come-PRES meat
"He's coming here, eating beef" (LL: AW_0031)

(155) ga-di-n mayh-ga, jamh-ma-wu ga-di-n danganyin
3sg-come-PRES here-ALL eat-ASP-?? 3sg-come-PRES tucker
"He's coming over, he's having a feed all the way along"(LL: AW_0031)

All of these examples were produced freely and all contain a derived form of the coverb. The coverb in (153) has been reduplicated[18], in (154) it is suffixed with the continuous marker *-yan* and the coverb in (155) is derived by a particle *-wu*[19]. All of these processes derive a form of the coverb that is no longer subject to the constraints on predicate formation. The derivational processes themselves are not very well understood and should constitute a focus of future research.

7.2.2.2 Word order

As discussed in section 3.2.3, the preferred word order of complex predicates in Wagiman is coverb followed by verb. This order of constituents signals the presence of a canonical complex predicate. While still allowing complex predicates, the reverse order, in which coverb follows verb, may also be used for bi-predicational structures that are not subject to the same constraints as canonical complex predicates. Coverbs of activity are allowably combined with motion verbs if the non-canonical word order is used.

(156) ga-ba-di-n dangah-ma
3pl-come-PRES open mouth-ASP
"They're coming here opening their mouths (for food)" (LL: AW_0034)

(157) ga-di-n jamh-ma danganyin, mahanan
3sg-come-PRES eat-ASP tucker this way
"He's coming and eating tucker, this way" (LL: AW_0022)

No sentence involving an underived coverb of activity combined with a verb of motion in a canonical complex predicate coverb-verb configuration has been recorded. The combination

[18] S. Wilson mentions reduplication and concludes that it may be used with coverbs to derive forms denoting iterativity, continuity or habituality (Wilson, 1999:55-57). However he is unable to say which of the various types of reduplication conveys which meaning.

[19] *-wu* is not clearly understood. Other examples appear to convey a change of state resulting from an action. E.g.
nga-bu-ni bort-ta-wu
1sgA.3sgO-hit-PAST dead-ASP-??
"I hit him to death"
The example here clearly does not accord with this.

of activity and motion is ungrammatical. The degree to which sentences are ungrammatical is related to the reason for that. For instance, coverb-verb combinations that are unable to merge due to a clash semantic features, those that elicit rejections, are ungrammatical in one way whereas the forms that are interpreted but not produced are ungrammatical for different reasons. The difference in the degree of ungrammaticality is what motivates the different elicited responses from speakers.

7.3 Ill-formed clauses

The activity coverb *Wirnh-na* 'whistle' is unable to occur in a canonical complex predicate formed by merger with the motion verb *di-nya* 'come'. The verb inherently requires an argument [$_{\text{Path}}$ to ([*here*])], while the coverb, since it denotes an activity, but not a goal-oriented one (section 7.1.1), disallows one. The potential merger of them can be demonstrated as in (158), by representing the predicate structures of each element by Lexical-Conceptual Structures.

(158) *wirnh-na* 'whistle' [$_{\text{Event}}$ move ([*whistle*]) ([$_{\text{Thing}}$])]

di-nya 'come' [$_{\text{Event}}$ move ([$_{\text{Thing}}$], [$_{\text{Path}}$ to ([*here*])])]

wirnh-na di-nya
'come whistling' [$_{\text{Event}}$ move ([*whistle*]) ([$_{\text{Thing}}$], [$_{\text{Path}}$ to ([*here*])])]

However, due to the restriction on, and mechanisms of predicate fusion (Wilson, 1999), these two elements would not combine in this way. Fusion takes place by the deletion of some part of the LCS of the verb and replacing the deleted section it with the LCS of the coverb. Since the coverb here contains no path function.

The merger of these two predicates is not the reason for their failure as a complex predicate. Rather they are unable to combine due to the contradictory information each element specifies as to the path argument. In this respect, these constructions differ from the combinations discussed in chapter 5 that produced argument structures with a clash of semantic features. Those constructed examples are ungrammatical because predicate fusion (Wilson, 1999) has no means of allowing their merger:

(159) *bort-ta* 'die *(inch.)*' [$_{\text{Event}}$ become ([$_{\text{Event}}$ be ([$_{\text{Thing}}$], [*dead*])])]

yu-nginy 'be' [$_{\text{Event}}$ be ([$_{\text{Thing}}$], [$_{\text{Place}}$])]

**bort-ta yu-nginy*
*‘be somewhere and die’

*[Event be ([Thing], [Place [Event become ([Event be ([Thing], [*dead*])])]

As mentioned in section 4.3.2.2, Alamblak allows this structure to emerge as a result of verb serialisation. Verb serialisation though, is taken to be an example of complex predicate formation by coindexation rather than merger (see section 4.3.1).

These structures are not allowed to occur. Predicate fusion has no way of accommodating the argument structures that would be required to represent the merger of stative verbs and inchoative coverbs. Furthermore, the constraints of Baker & Harvey (MS) explicitly rule out mergers of these types. It is not surprising then, that these structures elicit rejections whereas the structures that attempt to merge activity coverbs with motion verbs, like *wirnh-na ga-di-n* ‘come whistling’, are interpreted but never produced.

7.4 summary

There is clearly a correlation between the reason behind the ungrammaticality of a construction and the form of negative evidence appealed to. Those forms that attempt to combine a stative verb with an inchoative coverb, such as *bort-ta yu-nginy* ‘be + die’, are ill-formed as a result of the inability of their predicate structures to merge. These forms are rejected by speakers. However those forms that attempt to combine coverbs denoting activity with verbs of motion, such as *wirnh-na di-nya* ‘come + whistle’ are considered ill-formed for a different reason. They may combine freely as they are licensed to do so by the Wilson (1999) model of predicate fusion. However, the resulting argument structures contain contradictory information. One element requires a path argument while the other disallows one.

When constructed examples of these differing types are presented to speakers, the responses elicited similarly differ. Those that are unable to merge are rejected. Those that may merge but contain contradictory information regarding the presence of a path are accepted as meaningful, interpretable sentences but they never occur in freely produced, natural speech. Evidence of a negative nature is not randomly distributed, rather it shows a clearly defined distribution that correlates with the types of constructions being tested.

8 Conclusion

I have demonstrated in this thesis that negative forms of evidence, such as appealing to rejection of constructed examples, as well as the non-production of certain structures, can serve a more sophisticated role in linguistic research than simply verifying instances of a general rule. If the role of negative evidence were as basic as identifying which sentences can be said and which cannot, one would not expect to see a predictable distribution of the different forms of negative evidence.

In investigating Wagiman complex predicates it becomes clear that a structure has many different ways of being ungrammatical. The various reasons for ungrammaticality produce different responses from speakers. Those that are ungrammatical due to the mechanisms within the grammar not being able to combine the separate elements, are rejected when constructed and presented to speakers. Conversely, those that the grammar is able to combine but which violate constraints on faithful representation of the underlying forms are interpretable when constructed for speakers. Yet, speakers never produce these forms naturally, rather they produce bi-predicational structures that are not subject to the same constraints and may represent a much wider range of argument structures.

The opening chapters of this thesis outlined the grammatical constructions in Wagiman that formed the object of this investigation. The complex predicates of Wagiman were shown to combine independent elements and merge them together at the level of argument structure. These argument structures were represented as lexical conceptual structures, using notation and formalism built on Jackendoff (1990) but modified slightly to account for the differences in Wagiman predicates.

The constraints that restrict the formation of complex predicates were then introduced. They were shown to be able to predict which forms were completely ungrammatical, and which were merely structurally ungrammatical but semantically interpretable. These forms corresponded directly to the negative evidence and the responses they elicit. In other words, negative evidence relating to the ungrammaticality of some complex predicates in Wagiman showed a clear distribution that was entirely predictable based on the Wilson (1999) model of predicate fusion in Wagiman and the Baker & Harvey (MS) model of predicate formation.

8.1 Negative evidence

Complex predicates that involve a clash of semantic primitive features in their lexical conceptual structures, as predicted by Baker & Harvey (MS), elicit rejections. On the other hand, complex predicates that are able to merge and produce possible argument structures,

though ones that do not accurately represent the meanings conveyed by the underlying, individual elements, are interpretable. However the fact that they are interpretable does not mean that they are grammatical. On the contrary, the grammar was not able to produce forms that contained contradictory information regarding the presence of a path. This was evidenced by the fact that they do not occur in natural speech. Moreover, when speakers were asked to repeat a structure that they had interpreted immediately prior, a different, grammatical structure was produced instead. The structures they produced were not complex predicates formed by merger and were thus not constrained by the conditions on predicate formation proposed by Baker & Harvey (MS).

These two forms of negative evidence, rejection on one side and non-production though interpretation on the other, are not randomly distributed among the data. That is, the data shows a clear preference for one form of negative evidence over another, depending on the reason for the ungrammaticality of the form. This demonstrates clearly that negative evidence is not a mere means of identifying simply 'grammatical' from 'ungrammatical' as though grammaticality were a binary variable, rather the type of negative evidence used can inform the linguist of some grammatical information. Complex predicates in Wagiman demonstrate this to be true in at least one case.

This distribution, of evidence from rejection and evidence from non-production, is predicted based on the theoretical model used to analyse the constructions. The Wilson (1999) and the Baker and Harvey (MS) models jointly predict which forms are ungrammatical and for what reason. These reasons in turn predict which form of negative evidence is expected. This investigation bears this out.

Many of the intricate and subtle aspects of Wagiman language, especially complex predicates, while slowly becoming more understood, still remain a mystery. With each year the imperative grows to learn as much about the various languages of Australia whose speech communities are dwindling. Wagiman is one such language. The culture of the Wagiman people is encoded in a linguistic medium that, perhaps soon, will no longer be spoken fluently. I have tried in this thesis to accurately portray many of the aspects of the Wagiman language as best as I understand them. I hope I have been successful in this regard. In the future I endeavour to learn more of this language and its unique way of describing the world.

Abbreviations

1	1st person
2	2nd person
3	3rd person
A	Agent
ALL	Allative case
ASP	Aspect marker
COM	Comitative case
CONT	Continual marker
cv	Coverb
cp	Complex predicate
DAT	Dative case
DUAL	Dual suffix
ERG	Ergative case
FUT	Future tense
IMP	Imperative mood
LOC	Locative case
lv	Light verb
m	Masculine
NEG	Negative
NOM	Nominal
O	Object/Patient
PAST	Past tense
RDP	Reduplication
PERF	Perfect aspect
PL	Plural suffix
pl	Plural person
PRES	Present tense
PRIV	Privative case
REM.PAST	Remote past tense
sg	Singular person
v	Verb

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