Murrinh-Patha agreement: implications for the relationship between theory and description

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Murrinh-Patha agreement: implications for the relationship between theory and description

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1. INTRODUCTION

The relationship between formal linguistic theory and language description is at its best when each informs the other: language description throwing up new empirical challenges for theoretical assumptions, and linguistic theory providing insight into the nature of complex data. In this paper I exemplify this bi-directional relationship through the discussion of two agreement puzzles that arise in 'serialised' constructions in Murrinh-Patha, a head-marking polysynthetic language from the Northern Territory of Australia.[1]

Murrinh-Patha is one of a number of northern Australian languages in which main verbs are usually complex predicates (see McGregor 2002 for general discussion), consisting of a 'generic' element and a 'lexical' element which co-vary to produce a range of composite predicate meanings. In Murrinh-Patha, as opposed to other northern Australian languages, these are not different parts of speech (e.g. 'finite verb' and 'coverb'), but are morphologically combined into a single complex verbal word; I refer to these as the 'classifier stem' and 'lexical stem' respectively. In the serialised construction one member of a set of seven classifier paradigms is then serialised to the end of the complex verbal word to encode imperfective aspect.

There are two types of agreement puzzles that arise in these serialised constructions. The first puzzle involves subject number agreement, whereby the subject number of the serialised verb does not appear to 'agree' with that of the main verb (1). In this case, the empirical facts are relatively easy to state, but difficult to formalise. The second puzzle involves an apparent mismatch in verbal agreement whereby the serialised verb appears to agree with the main clause object in some cases, rather than the subject (2). Here I show that, while the empirical facts are puzzling at the outset, they are clarified when given a formal analysis within the framework of Lexical-Functional Grammar (LFG).[2]

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[1] This research would not have been possible without the cooperation and patience of my Wadeye friends – Carmelita Perdjert, Norma Kulumboort, Jeanie Jongman and Bonaventure Ngarri – and my Murrinh-Patha-savvy colleagues Michael Walsh and Joe Blythe. I thank all of them for helping me to learn (some of) the language and for their generosity in helping me with data gathering and analysing. I am also extremely grateful to the Faculty of Arts at the University of Melbourne for funding which has supported my fieldwork.

[2] In the examples the classifier and lexical stems are underlined and the serialised classifier is given in bold. Unless otherwise specified, examples are from the author's fieldnotes.

Murrinh-Patha has around 38 distinct classifier paradigms (see Street 1987, Walsh 1976). These have traditionally been labelled with numbers, in lieu of a proper analysis of their semantics. In

(1) *dirran-nintha-nu-bath=**pirrim***
3sS.28.nFut-du.m-RR-watch=3sS.STAND(3).nFut
'They two are looking at each other (while standing)'

(2) *Pakpak-mam-nan-be=**numpan***
cramp-3sS.HANDS(8).nFut-2plO-arm=2pS.GO(6).nFut
'Your (pl) arms are cramped.'

The following examples illustrate the basic aspectual contrast encoded by the serial verb construction. In (3), where there is no serial classifier, and the main predicate is inflected with non-future tense, the interpretation is necessarily (past) perfective. In (4) the serial classifier (also inflected with non-future tense), marks the construction as imperfective, allowing for a present imperfective interpretation.

(3) *dirraninthanubath*
dirran-nintha-nu-bath
3sS.28.nFut-du.m-RR-watch
'They (two) looked at each other.'

(4) *dirraninthanubath=dim*
dirran-nintha-nu-bath=**dim**
3sS.28.nFut-du.m-RR-watch=3sS.SIT(1).nFut
'They (two) are looking at each other.'

2. NUMBER MISMATCH

According to previous descriptions of the Murrinh-Patha system (e.g. Street 1987), the serialised classifier must agree with the main verb in subject person, number and tense. This is also how the systems are described for neighbouring languages such as Marrithiyel (Green 1989) and Ngan'gityemerri (Reid 1990). This agreement is illustrated in the following examples: in each example the

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some cases it is relatively straightforward to provide a classifier paradigm with a semantic gloss, in which case I have done so and additionally provided the traditional number label in brackets. In other cases, I have just stuck with the number identifier. The following non-obvious abbreviations are used: *d* 'dual sibling/paucal non-sibling classifier form'; *DAT* 'dative case'; *DM* 'discourse marker (exact function not yet determined!)'; *du* 'dual number'; *exc* 'exclusive'; *f* 'feminine and mixed groups'; *FOC* 'focus marker'; Fut 'future tense'; *inc* 'inclusive'; *LOC* 'locative preposition'; *m* 'masculine'; *MF* 'mother's father'; *NC* 'noun class marker'; *nFut* 'non-future tense'; *O* 'object'; *p* 'plural and paucal sibling classifier form'; *pauc* 'paucal number'; *PImp* 'past imperfective'; *pl* 'plural number'; *RR* 'reflexive/reciprocal'; *s* 'singular and dual non-sibling classifier form'; *S* 'subject'.

tense/aspect of the main verb is matched on the serial verb (e.g. future, non-future and past-imperfective respectively), as are the person and number features of the subject.

(5) *Ngay-ka marda me-marda-purl-nu=**ngu***
I-FOC belly 1sS.HANDS:RR(10).Fut-belly-wash-Fut=1sS.LIE(2).Fut
'I will wash my belly while I'm lying down.' (Walsh 1976: 239)

(6) *Bath pume-ngka-dha=**pirrini***
watch 3pS.HANDS(8).PImp-look-PImp=3pS.SIT(1).PImp
'They were waiting for him.' (Kulamburut/Walsh story, line 13)[3]

However, note that the serial 'verb' is not a complete verb in the sense that it consists only of the first slot in the main verbal template (i.e. the slot containing the classifier stem). In (5) and (6) above the main verb carries additional tense/aspect marking (*-nu* and *-dha* respectively), but this is not repeated on the serial verbs despite the tense/aspect agreement. It would not be grammatical for this additional tense/aspect marking to be absent from the main verb. Thus, serial verbs like *ngu* in (5) and *pirrini* in (6) are not grammatical as main verbs: the grammatical forms would be *ngu-nu* and *pirrini-dha*.

Additional number markers are also not repeated on the serial verb, as the following examples illustrate. In the contrast between (7a) and (7b) we see that the dual (non-sibling) category is marked on the main verb by the additional of a dual number marker.[4] In the imperfective equivalents (7c) and (7d), however, the serial verb remains in the same form despite the change in subject number: the dual number marker is not repeated on the serial verb (7d).[5] (7e) is provided to show that it is possible to vary subject number on the serial verb – we cannot simply account for (7d) by assuming that *dim* is a fixed form used in serial constructions irrespective of the number of the subject.

(7) (a) *manganta*
mangan-rta
3sS.SNATCH(9).nFut-hug
'He hugged her.'

[3] This example is taken from a story published in Hercus and Sutton (1986). The morphological analysis and glosses are mine, and I have retranscribed some of the Murrinh-Patha in accordance with the current spelling system.

[4] Murrinh-Patha has a complex set of pronominal and verbal agreement categories, distinguishing four numbers (singular, dual, paucal and plural) as well as making a distinction in the dual and paucal categories between groups of siblings and groups of non-siblings. This is illustrated in more detail in Table 1.

[5] Once again, Murrinh-Patha differs from its neighbours in this respect. In both Marrithiyel (Green 1989) and Ngan'gityemerri (Reid 1990), the number markers are repeated on the serial verbs in such contexts.

(b) *manganintharta*
mangan-nintha-rta
3sS.SNATCH(9).nFut-du.m-hug
'They two (boys, non-siblings) hugged her.'

(c) *manganta=dim*
mangan-rta=**dim**
3sS.SNATCH(9).nFut-hug=3sS.SIT(1).nFut
'He's hugging her.'

(d) *manganintharta=dim*
mangan-nintha-rta=**dim**
3sS.SNATCH(9).nFut-du.m-hug=3sS.SIT(1).nFut
'They two (boys) are hugging her.

(e) *pumanganta=pirrim*
pumangan-rta=**pirrim**
3pS.SNATCH(9).nFut-hug=3pS.SIT(1).nFut
'They are hugging her.'

Thus, the serial verb has a different range of grammatical meanings than it would if it was functioning as a main verb. *Dim*, for example, can only ever have a singular subject interpretation as a main verb ('He's sitting' **never** 'They two are sitting'); a dual (non-sibling) subject interpretation requires the additional of the dual number marker (*Dim-nintha*). This is in direct contrast to (7d), where *dim* functions as the serial verb 'agreeing' with dual non-sibling subject in the main verb.

Such number 'mismatch' is also found with the dual sibling and paucal, where once again, the absence of the additional number marker on the serial verb (in this case the paucal number marker *–ngime* (f) / *-neme* (m)) leads to a situation where we appear to have a serial verb inflected for dual (sibling) subject 'agreeing' with a paucal non-sibling subject in the main verb. This is shown in (8):

(8) *pangan-nunggu-bath-neme=**pirrim(ka)***
3dS.28.nFut-RR:pauc-watch-pauc.m=3dS.SIT(1).nFut
'They're (paucal non-sibling) watching each other.'

It is clear that there is some sort of number agreement here: the serial verb must be in its plural subject form when the main verb has a plural subject, and in its singular form when the main verb as a singular subject. However, the number agreement that we find in the dual and paucal number categories does not seem to be identical to what we find in main verbs, since categories that are distinguished in the main verb via the additional number markers are not distinguished in the serial verbs.

One possibility would be to argue that serial verbs operate according to a different set of number categories than main verbs. Note however, that while the serial verb is not agreeing fully with the main verb, in the sense that it is not in the form that it would have to be if it was functioning as a main verb with the same number features, it *is* agreeing in the sense that it must use the same *classifier form* that it would as a main verb with the same number features. To simply treat the main verbs and serial verbs as operating according to different systems with different sets of categories, risks missing this generalisation that the agreement is in the form of the classifier, rather than in number features themselves. This is made clearer when we consider the subject number system in Murrinh-Patha verbs more generally, presented in Table 1.[6]

Table 1
The encoding of subject number in the Murrinh-Patha verb

Classifier form	Number marker	Subject properties
SINGULAR	unmarked	Singular
SINGULAR	dual (*ngintha* (f) */nintha* (m))	Dual non-sibling
~~SINGULAR~~	~~paucal (*ngime* (f) / *neme* (m))~~	~~UNGRAMMATICAL~~
DUAL	unmarked	Dual sibling
~~DUAL~~	~~dual (*ngintha* (f) */nintha* (m))~~	~~UNGRAMMATICAL~~
DUAL	paucal (*ngime* (f)/*neme* (m))	Paucal non-sibling
PLURAL	unmarked	Paucal sibling / Plural
~~PLURAL~~	~~dual (*ngintha* (f) */nintha* (m))~~	~~UNGRAMMATICAL~~
~~PLURAL~~	~~paucal (*ngime* (f) / *neme* (m))~~	~~UNGRAMMATICAL~~

In the context of this system, the number agreement in serial verbs is fairly straightforward: the serial verb is simply agreeing with the classifier stem in the main verb, appearing in the SINGULAR form for singular and dual non-sibling categories, the DUAL form for dual sibling and paucal non-sibling categories, and the PLURAL form in all other cases. While this generalisation is reasonably intuitive and easy to state descriptively, it is not at all straightforward analytically. This is due to the fact that we do not usually think of agreement as existing between the forms of (parts of) words, but rather between the categories that these items instantiate.

One option would be to assume 'rampant homonymy' throughout the classifier paradigms so that all classifiers (whether functioning within main verbs or serial

[6] Although I have used the labels SINGULAR, DUAL and PLURAL for the three classifier forms, they can't be analysed as contributing these number features for the subject. If this were so, then the singular number feature contributed by the classifier form would clash with the dual number marker in dual non-sibling subject constructions, for example. Furthermore, we would have no account for why the singular serialised form is compatible with dual non-sibling subjects.

verbs) would in fact be analysed as marking a 6-way number/sibling contrast as follows:

Table 2
Classifier SIT(1) (non-future tense) assuming 'rampant homonymy'

dim	singular
dim	dual non-sibling
pirrimka	dual sibling
pirrimka	paucal non-sibling
pirrim	paucal sibling
pirrim	plural

While this analysis has the advantage of allowing the agreement facts in serial verb constructions to follow automatically, it treats as 'accidental' a systematic pattern that exists across all 38 classifier paradigms in all six tense/aspect/mood categories and even among most of the pronouns as well (see Street 1987, Blythe 2009 for detailed discussion). If there really were 6 distinct number/sibling categories in Murrinh-Patha classifier paradigms, it would be rather surprising not to find them distinguished in at least *some* places.

An alternative option would be to analyse the system as consisting of three broad number categories reflecting the three-way contrast in form exemplified in Table 2. This would result in three categories encompassing the following meanings:

Table 3
Classifier SIT(1) assuming 'three broad number categories'

Sample form	**Category**	**'meanings' encompassed**
dim	'dingular'	singular and dual non-sibling
pirrimka	'daucal'	dual sibling and paucal non-sibling
pirrim	'plucal'	paucal sibling and plural

However, this approach brings with it some additional problems. Firstly, these categories are extremely unnatural and do not clearly correspond to any other number categories found in the typological literature (e.g. Corbett 2000). More importantly, however, we would still need to account for the fact that each of the forms in Table 3 has only one of its two possible meanings when it occurs on its own as a main verb: *dim*, for example, can only ever be interpreted as referring to a singular subject. If it were encoding a 'dingular' category, we might expect it to

be truly ambiguous in this context between a singular subject and a dual non-sibling subject.[7]

A third option, which is the one I advocate here, is somewhat of a compromise between these two. I propose that each of the three formal distinctions (i.e. SINGULAR, DUAL and PLURAL in Table 1) is associated with two possible subject number values: one is fully specified, while the other is underspecified and requires extra information from elsewhere in the verb.

Assuming the formal framework of Lexical-Functional Grammar (LFG, see Bresnan 2001, Dalrymple 2001 for general overviews) this can be achieved straightforwardly by using a combination of disjunctive features and constraining equations as shown in the following partial lexical entries:[8]

(9)

SINGULAR: (↑ SUBJ NUM) = SG V (↑ SUBJ NUM) $=_c$ DU

DUAL: $\left\{\begin{array}{l}(\uparrow \text{ SUBJ NUM}) = \text{DU} \\ (\uparrow \text{ SUBJ SIB}) = +\end{array}\right\}$ V (↑ SUBJ NUM) =c PAUC

PLURAL: (↑ SUBJ NUM) = PL V $\left\{\begin{array}{l}(\uparrow \text{ SUBJ NUM}) = \text{PAUC} \\ (\uparrow \text{ SUBJ SIB}) = +\end{array}\right\}$

This analysis captures the formal facts straightforwardly, since the SINGULAR classifier stems, for example, can only have singular interpretations when used on their own, but allow dual interpretations when the constraining equation is satisfied by the presence of a dual number marker elsewhere in the verb. Since the serialised verb forms a complex predicate with the main verb, the presence of a dual number marker in the main verb will satisfy the constraining equation, licensing the SINGULAR form in 'agreement' on the serialised verb. However, while this analysis works formally, it clearly doesn't capture the basic descriptive generalisation, which is simply that the serialised classifier must agree with the classifier category of the main verb.

[7] If we wanted to save this analysis, we could assume that there is a zero singular number marker in (7a) in contrast with the dual non-sibling marker *-ngintha* in (7b). However, this would require also assuming that there is a zero dual sibling marker in *pirrimka* (8), and zero paucal sibling and plural forms to account for *pirrim*. In my view, such a proliferation of zeros makes this approach even more undesirable.

[8] For simplicity, I am abstracting away from all but number agreement features here – these are partial lexical entries only.

3. ARGUMENT 'MISMATCH'

Further agreement 'mismatches' arise in serialised constructions with impersonal verbs (Walsh 1987), since the serialised verb often shows agreement with the experiencer, not the apparent grammatical subject:

(10) *dem*-***ngi***-*ralal*=***ngurran***
3sS.POKE:RR(21).nFut-**1sgO**-thirsty=**1sS.GO(6).nFut**
'I'm thirsty.'

It is notable that we also find apparent object agreement when serial verb constructions co-occur with 'vouns' (Walsh 1996), in which the logical subject is likewise encoded with the object marker:

(11) *pakpak*-*mam*-***ngi***-*be*=***ngurran***
cramp-3sS.HANDS(8).nFut-**1sgO**-arm=**1sS**.**GO(6).nFut**
'My arm is [habitually] cramped' (Walsh 1996: 241)

The analysis of number marking presented in §2 assumes that serial verbs will always agree with the *subject* of the main verb. These examples of apparent object agreement challenge such an account, since they suggest that serial verbs may also agree sometimes with the object of the main verb. On the contrary, I argue that the serial verbs *are* agreeing with the subjects in examples such as (10) and (11), but that the mismatch lies with the argument encoding in the main verb, not in the agreement of the serial verb. In other words, I take the agreement of the serial verb to indicate that the argument encoded with the object marker in these cases is the subject after all, and that the presence of the 'object' marker here is a morphological phenomenon rather than a syntactic one.

Why would a language use an object marker to encode the subject? In the case of Murrinh-Patha, I believe this arises from the fact that there is no independent subject marker in the Murrinh-Patha verb. Subjects are marked as part of the complex portmanteau that encodes the classifier stem. In the 'impersonal verb' and 'voun' constructions presented above, the classifier stem is fixed as third person singular. Thus, I argue that it has been reanalysed as a dummy form, and no longer encodes the subject. Instead, the object marker has been co-opted to encode the subject, since there is no other subject marker available. Further evidence for this analysis comes from the fact that the object marker is also used to express the single argument of the non-verbal constructions Walsh (1996) terms 'nerbs', in which there is no verbal element at all:

(12) *lurruwith*-***ngi***
quick-**1sgO**
'I'm quick' (Walsh 1996: 239)

Thus, there are three different construction types (impersonal verbs (10), 'vouns' (11) and 'nerbs' (12)) in which the object marker is used to encode an argument that is clearly not an object (see also Walsh 1996:238). In at least two of these cases (impersonal verbs and 'vouns') a serial verb agrees anomalously with the argument marked as 'object'. In the third case ('nerbs') the object marker encodes the single argument of an adjectival predicate – an argument that would be considered a subject by all standard assumptions. This evidence points strongly towards the conclusion that the object marker in these three construction types is not encoding an object, but is in fact encoding the subject instead.

My proposal**,** therefore, is that the 'object' marker in Murrinh-Patha does not realise the OBJ grammatical function alone, but rather marks a core grammatical function that may be either SUBJ or OBJ, depending on the particular grammatical context in which it occurs. Following Dalrymple (2001), I use TERM as a variable for a core grammatical function (in this case, TERM may be realised as either SUBJ or OBJ).

In a large majority of verbs, the classifier stem contributes the SUBJ argument.[9] Due to the Principle of Uniqueness, which states that an attribute (e.g. SUBJ) may have only one value, in these cases the 'object' marker cannot also contribute the SUBJ, and so can only be interpreted as encoding the OBJ. This is what accounts for the regular use of the object marker in transitive verbs.

When there is no verb, as with 'nerbs' (12), there is no classifier stem to contribute the SUBJ. In this case, the 'object' marker can be used for this purpose since the principles of Completeness and Coherence will ensure that the OBJ option is ruled out, because the OBJ is not subcategorised for by the adjectival predicate.[10] This account then extends to the 'vouns' and the lexicalised impersonal verbs if we assume that the classifier in these cases is also not expressing the SUBJ, but is in fact a fixed, lexicalised form that has been bleached of its grammatical function information. This analysis is exemplified for the impersonal verb *dem ... ralal* 'be thirsty':

(10') *dem-ngi-ralal=**ngurran***
3sS.POKE:RR(21).nFut-1sgO-thirsty=**1sS.GO(6).nFut**
'I'm thirsty.'

dem…ralal: (↑ PRED) = 'be thirsty <(↑SUBJ)>'
(↑ TENSE) = NFUT

The lexical entry for *dem ... ralal* given above defines the following f-structure. Note that there is no information provided about the SUBJ.

[9] This is achieved in LFG by allowing the classifier stem to contribute a PRED feature for the SUBJ by virtue of the equation (↑SUBJ PRED) = PRO.

[10] The Completeness condition requires that every function designated by a PRED be present in the f-structure of that PRED. The Coherence condition requires that every argument function in an f-structure be designated by a PRED (Bresnan 2001: 63).

(13)
$$\begin{bmatrix} \text{PRED 'be thirsty <SUBJ>'} \\ \text{TENSE NFUT} \\ \text{SUBJ } [\ ] \end{bmatrix}$$

Since the verb subcategorizes for a SUBJ, the Completeness condition ensures that the 'object marker' be interpreted as realizing the SUBJ since otherwise the structure would be ungrammatical. The f-structure for the whole verb is therefore as in (14):

(14)
$$\begin{bmatrix} \text{PRED 'be thirsty <SUBJ>'} \\ \text{TENSE NFUT} \\ \text{SUBJ} \begin{bmatrix} \text{PRED PRO} \\ \text{PERS 1} \\ \text{NUM SG} \end{bmatrix} \end{bmatrix}$$

Since the 'object' marker is actually providing information about the SUBJ in the f-structure, the clause as a whole is specified as having a first person singular subject. The first person singular subject agreement on the serial verb in (10') therefore follows naturally. Viewed from the perspective of LFG, this puzzling empirical fact about argument mismatches in serialised constructions receives a straightforward analysis. Furthermore, we can provide a unified account for a range of related argument-marking anomalies in nerbs, vouns and lexicalised impersonal verb constructions.

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