

PERSON MARKING IN WALBIRI¹

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1. INTRODUCTORY OBSERVATIONS

Walbiri distinguishes finite and infinitive verb forms. Infinitive forms appear in subordinate clauses, while finite verb forms appear both in main clauses and in subordinate clauses. The subordinate (or second) clause in (1) has an infinitive verb form, while the subordinate clause in (2) has a finite verb:²

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I am honored to be able to dedicate this work to Morris Halle, who has been of tremendous help to me in my attempts to learn about the nature of linguistic inquiry. I only wish the present work were less unfinished, less tentative, and therefore more worthy of him. However, I think it is in the nature of work on languages radically different from one's own that almost inevitably such studies are primarily suggestive (rather than conclusive) and somewhat elementary in scope. I hope this paper will serve as a basis for further research.

² Most of my Walbiri data come from Yuendumu, N.T., Australia. I am especially indebted to Sam Tjapangađi Johnson, Mick Tjupurula Connell, and Dinny Tjapaltjari Anderson for their efforts to teach me their language.

The consonants of Walbiri can be tabulated as follows:

	APICO-ALVEOLAR		LAMINO-ALVEOPALATAL	APICO-DOMAL	DORSO-VELAR
stops	<i>p</i>	<i>t</i>	<i>tj</i>	<i>ʈ</i>	<i>k</i>
nasals	<i>m</i>	<i>n</i>	<i>nj</i>	<i>ɳ</i>	<i>ŋ</i>
laterals		<i>l</i>	<i>lj</i>	<i>ɭ</i>	
flaps		<i>r</i>		<i>d</i>	
glides	<i>w</i>		<i>y</i>	<i>r</i>	

The vowels are: relatively high front (unrounded) /i/, relatively high back (rounded) /u/, low (unrounded—ranging from front to back, but typically rather central) /a/. Vowel length is distinctive (for example, /ɲurpa/ 'unknowing', /ɲu:rpa/ 'throat, larynx'). Stress is on the first vowel of the word. The orthography I have used here, in the main, conforms with practical orthographies used widely in Central Australia.

Published works on Walbiri include Capell's sketch (1962) and Reece's grammar (1970).

- (1) *wawiri-tjara ka-ŋa-palaŋu nja-ŋji, maŋa ŋa-ŋinjtja-kura*
kangaroo-dual present-I-them see-nonpast, grass eat-infinitive-complementizer
'I see two kangaroos eating grass'
- (2) *wawiri-tjara ka-ŋa-palaŋu nja-ŋji, kutja-ka-pala maŋa ŋa-ŋi*
kangaroo-dual present-I-them see-nonpast, relative-present-dual grass eat-nonpast
'I see two kangaroos eating grass'

In both (1) and (2), the verb of the main (or first) clause is finite. In the subordinate clause of (1), the verb form consists of a stem /ŋa-/ 'eat' followed by the infinitive ending /-ŋinjtja-/, and the combination is followed by the complementizer /-kura/ 'object relative'. In the main clauses of (1) and (2), and in the subordinate clause of (2), the verb form consists of a stem (/nja-/ 'see', /ŋa-/ 'eat') followed by an inflectional suffix /-ŋji ~ -ŋi ~ .../ 'nonpast tense'.³ In the finite clauses, moreover, there is an auxiliary element /ka-/ 'present' which, in conjunction with the verbal inflection, marks a general (as opposed to specifically "immediate") present tense. The subordinate finite clause has, in addition, the complementizer /kutja-/ 'relative' prefixed to the auxiliary base.

In the discussion to follow, I will be concerned exclusively with finite clauses, and when I speak of sentences, unless I indicate otherwise, I will mean clauses which contain auxiliaries and finite verbs. For the most part, I will restrict my discussion to simple sentences, or at least to sentences whose surface structures are simple in the sense that they do not contain embeddings.

As is evident from the examples already given, the modal categories of tense, mood, and aspect are represented discontinuously in the surface structures of Walbiri sentences by elements appearing in a constituent which I have referred to as the "auxiliary" and by suffixes in the verb word. As further illustration, consider the sentences (3a-c):

- (3) (a) *ŋatju ka-ŋa puła-mi*
I present-I shout-nonpast
'I am shouting; I shout'

(Continued)

³ Speaking in extremely superficial terms, it is possible to recognize five verbal conjugations in Walbiri according to the alternants which various grammatical endings exhibit in combination with them. In the following table, each of the five conjugations is represented by a model verb under which the appropriate endings are placed in columns:

	/waŋka-/ 'to speak'	/paka-/ 'to strike'	/nja-/ 'to see'	/ŋa-/ 'to eat'	/ma-/ 'to take'	
-mi	-ŋi	-ŋji	-ŋi	-ni		NONPAST
-tja	-ŋu	-ŋu	-ŋu	-nu		PAST
-nja	-ŋinja	-ŋanja	-ŋinja	-nanja		PRESENT
-tju	-ku	-ŋku	-lku	-nku		FUTURE
-ya	-ka	-ŋka	-ŋtja	-nta		IMPERATIVE
-ŋjtja	-ŋinjtja	-ŋjtja	-ŋinjtja	-ninjtja		INFINITIVE
IMPERATIVE +	-la					IRREALIS

The suffixes glossed 'present' and 'future' are of rather limited use in the major Walbiri communities, although they are recognized by most speakers. (The present is found in songs over the entire area.) In modern spoken Walbiri, the nonpast is used, in conjunction with auxiliaries, to indicate present and future tense in the majority of syntactic circumstances.

The nonpast ending in the conjugation represented by /waŋka-/ 'to speak' is /-mi/ or zero; I use /-mi/ consistently in the text of this paper. Also, the nonpast in the /paka-/ and /ŋa-/ conjugations is either /-ŋi/ or /-ni/; I use the former.

It is possible to reduce the number of conjugations to three by combining two of the monosyllabic conjugations with the two polysyllabic ones (see Hale (1969b)). Furthermore, it is possible to relate conjugation membership to transitivity to a degree which is significantly greater than chance. This has some possible significance, if not synchronically, then at least historically (see Hale (1970)).

- (b) *ɲatju lpa-ɲa puła-tja*
I past-I shout-past
'I was shouting; I shouted'
- (c) *ɲatju kapi-ɲa puła-mi*
I future-I shout-nonpast
'I will be shouting; I will shout'

In each of these sentences, the co-occurrence of a particular auxiliary "base" (/ka-/ 'present', /lpa-/ 'past', /kapi-/ 'future') with a particular verbal ending (/mi/ 'nonpast', /-tja/ 'past') marks a specific modal category. I will not be concerned here with a discussion of Walbiri modal categories, but rather with another aspect of the auxiliary constituent. The auxiliary is also the location of suffixes agreeing in person and number (and case, to some extent) with noun phrases appearing elsewhere in the sentence: in (3a-c), the auxiliary contains the suffix /-ɲa/ '1st person singular (subj)' in agreement with the subject /ɲatju/ 'I'; similarly, the suffix /-palaŋu/ '3rd dual (obj)' appearing in the auxiliaries of the main clauses of sentences (1) and (2) is in agreement with the object /wawiri-tjara/ 'kangaroo-dual'. It is with the person-marking suffixes that the present discussion will be primarily concerned.

The sentences used in illustration so far illustrate the general outlines of the internal structure of the auxiliary constituent. The central ingredient is what I will refer to as the "base" (represented by /ka-/ , /lpa-/ , /kapi-/ in (3)); person-marking suffixes follow the base, and a complementizer (for example, /kutja-/ in (2)) may precede the base. In order to maintain this internal analysis, it will be necessary to recognize a phonologically null auxiliary base, which I will represent by ϕ - in examples. Like its phonologically constituted counterparts, the zero base serves as a peg for the attachment of person markers and complementizers.⁴

Compare the aspectually indefinite or nonspecific sentences (3a-c) with the aspectually definite sentences (4a,b):

- (4) (a) *ɲatju ϕ -ɲa puła-mi*
I ϕ -I shout-nonpast
'I'll shout; let me shout'
- (b) *ɲatju ϕ -ɲa puła-tja*
I ϕ -I shout-past
'I shouted'

And compare the subordinate clause of (2) with that in (5):

- (5) *wawiri-tjara kapi-ɲa-palaŋu pura-mi, kutja- ϕ -ɲa-palaŋu pantu-ɲu*
kangaroo-dual future-I-them cook-nonpast, relative- ϕ -I-them spear-past
'I'm going to cook the two kangaroos that I (have) speared'

⁴ I give here a list of auxiliaries together with the verbal endings (by gloss) with which they co-occur. Approximate meanings are given in single quotes: / ϕ ... NONPAST/ 'immediate future, optative'; / ϕ ... PAST/ 'past definite, preterite'; / ϕ ... PRESENT/ 'immediate present, demonstrative aspect'; / ϕ ... FUTURE/ 'immediate future, optative'; / ϕ ... IMPERATIVE/ 'imperative'; /ka... NONPAST/ 'present, progressive, usitative'; /kapi... NONPAST/ 'future'; /lpa... PAST/ 'indefinite (imperfect) past, narrative past'; /katjika... NONPAST/ 'potential, present conditional (apodosis)'; /kalaka... NONPAST/ 'admonitive'; /katjilpa... IRREALIS/ 'present conditional (protasis)'; /katji... NONPAST/ 'future conditional (protasis)'; /katji... IRREALIS/ 'past conditional (protasis)'; /kapi... IRREALIS/ 'past conditional (apodosis)'.

The principal complementizers (combinable with the auxiliary bases / ϕ /, /ka/, or /lpa/) are: /kutja-/ 'relative', /yɲu- (yɲa- ~ yi-)/ 'jussive, purposive', and /kula-/ 'negative'. It is probable that /katji-/ , listed as an auxiliary base, should also be regarded as a complementizer; however, the relationship among /katji-/ , /katjika-/ , and /katjilpa-/ is no longer a straightforward one.

From a gross morphological point of view, the zero base is no different in its behavior from the phonologically constituted auxiliary bases and, like the latter, it co-occurs with the verbal endings to render particular modal meanings.

I will assume in what follows that the basic subconstituent in the auxiliary is the base (or possibly a complementizer together with the base) and that the person markers are introduced into the auxiliary transformationally. That is to say, I will assume that there is a point in the derivation of Walbiri finite clauses at which the person-marking suffixes are not present in the auxiliary. The purpose of this paper is to point out a number of facts of Walbiri person-marking which must in one way or another be accommodated in those parts of the grammar which provide for the correct surface form of Walbiri auxiliaries. Before entering into the central topic, however, I would like to digress momentarily in order to discuss the external syntax of the auxiliary with a view to determining its basic position within the sentence. This basic position will presumably be that which the auxiliary occupies at the time the person markers are inserted into it.

2. THE POSITIONING OF THE AUXILIARY

I have implied in the foregoing discussion that the auxiliary is a "constituent" of Walbiri finite clauses. I will make this assumption explicit by proposing that the parts of the auxiliary are exhaustively dominated by a node "Aux" and that the Aux node is in turn immediately dominated by the sentence node "S." My concern here will be with the relative order position of Aux among the other constituents of a sentence.

In the sentences of (3) and (4), the auxiliary follows the subject /ɲatju/ 'I'. However, in the main clauses of (1) and (2), where the first person subject pronoun has been deleted (as is normally the case for nonemphatic pronouns), the auxiliary follows the object /wawiri-tjara/ 'kangaroo-dual'. If the subject pronoun were deleted from, say, (3a), then the auxiliary would follow the verb, as in (6):

- (6) *puła-mi ka-ɲa*
shout-nonpast present-I
'I am shouting; I shout'

And the auxiliary would also follow the verb if the relative order of subject and verb in (3a) were inverted:

- (7) *puła-mi ka-ɲa ɲatju*

The generalization which can be made, of course, is that in the surface structures exemplified here, the auxiliary is consistently in second position, that is, it follows the first constituent of the sentence. And, in general, while the relative ordering of the major constituents of a sentence is relatively free, the surface position of Aux is relatively fixed. Take, for example, the nonauxiliary constituents of a sentence like (8):

- (8) *ɲarka-ɲku ϕ -palaŋu wawiri-tjara kułada-ɲu pantu-ɲu*
man-ergative ϕ -them kangaroo-dual spear-instrumental spear-past
'The man speared two kangaroos with a spear'

These constituents can permute freely, subject to conditions having more to do, strictly speaking, with considerations of style and the well-formedness of discourses

than with the syntax of the sentence. The auxiliary, however, is consistently in second position, as we see in (9):

- (9) (a) *wawiri-tjara* ϕ -*palanu kula* ϕ -*lu pantu-nu* *ɲarka-ɲku*
 (b) *kula* ϕ -*lu* ϕ -*palanu wawiri-tjara pantu-nu* *ɲarka-ɲku*
 (c) *pantu-nu* ϕ -*palanu ɲarka-ɲku wawiri-tjara kula* ϕ -*lu*
 :

It is evident that the deep structure position of Aux cannot be identified with its surface structure position since second position, in the sense required for the ultimate positioning of Aux, can be defined only rather late in the derivation of a particular sentence, at a point subsequent to the possible application of rules which delete (as in (6)) or permute (as in (9)) other sentence-internal constituents. In fact, if the positioning of Aux is to be regarded as a rule at all, as I will assume, its application must be extremely late in the derivation of a sentence and must even, as I shall show, make reference to phonological information.

I would like to suggest that the auxiliary is basically initial in Walbiri and that it is moved into second position by a rule which I shall call Aux-Insertion. This suggestion is supported to some extent by the observation that, under certain phonologically specifiable circumstances, the auxiliary may actually appear in sentence-initial position (as it does in the subordinate clauses of (2) and of (5), for example). If an auxiliary base, or the combination of complementizer plus base, is disyllabic or longer, then Aux may remain in initial position. Thus, while the auxiliary must appear in second position in the surface structures of (10), because the auxiliary bases are less than disyllabic in length, the auxiliary of (11) may appear either in initial position or in second position since the future base /*kapi-*/ is disyllabic:

- (10) (a) *wawiri ka-ɲa pura-mi*
 kangaroo present-I cook-nonpast
 'I am cooking the kangaroo'
 (b) *wawiri* ϕ -*ɲa pura-tja*
 kangaroo ϕ -I cook-past
 'I cooked the kangaroo'
 (11) (a) *kapi-ɲa wawiri pura-mi*
 future-I kangaroo cook-nonpast
 (b) *wawiri kapi-ɲa pura-mi*
 kangaroo future-I cook-nonpast
 'I will cook the kangaroo'

Similarly, in the negatives corresponding to (10a,b), the auxiliary may remain in initial position since the negative element (which, like a complementizer, is prefixed to the auxiliary base) is disyllabic:

- (12) (a) *kula-ka-ɲa wawiri pura-mi*
 negative-present-I kangaroo cook-nonpast
 'I am not cooking the kangaroo'
 (b) *kula- ϕ -ɲa wawiri pura-tja*
 negative- ϕ -I kangaroo cook-past
 'I did not cook the kangaroo'

In fact, there are circumstances in which the negative auxiliary may not be inserted into second position at all, namely, when, as a result of permutation or

deletion occurring prior to Aux-Insertion, the verb immediately follows the negative auxiliary. Thus, while (a), (b), and (c) of (13) are possible, (d) and (e) are not:⁵

- (13) (a) *ɲatju kula-ka-ɲa pu* ϕ -*mi*
 (b) *kula-ka-ɲa pu* ϕ -*mi ɲatju*
 (c) *kula-ka-ɲa pu* ϕ -*mi*
 'I am not shouting'
 (d) **pu* ϕ -*mi kula-ka-ɲa ɲatju*
 (e) **pu* ϕ -*mi kula-ka-ɲa*

Aux-Insertion operates in finite clauses, whether they are subordinate or main. In the subordinate clause of sentence (2), the auxiliary may remain initial because of the phonological weight added to the auxiliary base by the prefixed relative complementizer /*kutja-*/, but it could also be moved, as in the variant (14):

- (14) *wawiri-tjara ka-ɲa-palanu nja-ɲji, maɲa kutja-ka-pala ɲa-ɲi*

To account for these various observations, I will assume that the auxiliary is basically initial in Walbiri and that it is moved into second position by the Aux-Insertion Rule. Furthermore, Aux-Insertion is (a) obligatory if the portion of the auxiliary preceding the person markers is less than disyllabic (that is, monosyllabic or phonologically null), (b) blocked if the auxiliary is the negative and is immediately followed by the verb, and (c) optional otherwise. The insertion must be ordered in the grammar to follow all syntactic operations which have an effect on the ordering of nonauxiliary constituents.⁶

It is appropriate to think of Aux-Insertion as having the effect of making the auxiliary enclitic to the first nonauxiliary constituent of the sentence. The auxiliary is unstressed and, particularly where the base is monosyllabic or phonologically empty, it forms a prosodic unit with the preceding word.⁷ I have left inexact the

⁵ It is conceivable that what is responsible for this is the fact that the verb must be within the "scope" of the negative and, further, that material which is in the scope of the negative must be to its right.

⁶ It is also possible in Walbiri to extrapose noun phrases to the left of the main body of the sentence. In such cases it is within the main body of the sentence that Aux-Insertion operates, as in the following:

- wawiri ɲjampu, ɲatjulu-lu* ϕ -*ɲa pantu-nu*
 kangaroo this, I-ergative past-I spear-past
 'This kangaroo, I speared'

I assume that this operation of left-dislocation precedes Aux-Insertion and that it extraposes the noun phrase to the left of the initial Aux. For the purposes of Aux-Insertion, the extraposed noun phrase is no longer a part of the sentence.

⁷ This refers not only to the behavior of Aux and the preceding word with respect to stress and intonation (a word and following enclitic Aux are stressed as if they comprised a single word), but also to the phenomenon of vowel assimilation according to which a suffixal high vowel assimilates to a preceding final high vowel (for example, /*ka* ϕ -*ku*/ \rightarrow [*ka* ϕ -*ki*] 'boomerang-dative'—see Hale (to appear)). Enclitic person markers behave like suffixes in this regard. For example, (a) becomes (b) by vowel assimilation:

- (a) *maliki-lu* ϕ -*tju ya* ϕ -*ku-nu*
 dog-ergative past-me bite-past
 'The dog bit me'
 (b) *maliki-li* ϕ -*tji ya* ϕ -*ku-nu*

And (c) becomes (d):

- (c) *kuyu* ϕ -*li* ϕ -*ɲa-nu*
 meat past-we eat-past
 'We ate meat'
 (d) *kuyu* ϕ -*li* ϕ -*ɲa-nu*

notion "sentence constituent" in referring to the operation of Aux-Insertion, and the examples I have given so far would lead one to believe that the rule inserts the auxiliary immediately to the right of the first nonauxiliary "word" of a sentence. This is not correct, however, since a noun phrase consisting of more than one word functions as a unit with respect to Aux-Insertion, as can be seen from (15):

- (15) (a) *wawiri njampu kapi-ŋa pura-mi*
kangaroo this future-I cook-nonpast
'I will cook this kangaroo'
(b) *tjaŋtu wiŋi-ŋki φ-tji yaŋku-ŋu*
dog big-ergative φ-me bite-past
'The big dog bit me'

I feel, therefore, that the correct formulation of Aux-Insertion will make reference to constituents of sentences rather than to words; that is, the auxiliary is inserted to the right of the immediately following single constituent which is immediately dominated by the sentence node S, regardless of the number of words that single constituent might itself contain. Thus, an auxiliary will be inserted to the right of a noun phrase, regardless of its internal complexity. It is possible, however, to break up a noun phrase so that its erstwhile subconstituents become separate sentence constituents. This is even stylistically preferred. When it happens, the parts of the former noun phrase are free to scramble among the other sentence constituents and, of course, they function as separate constituents with respect to Aux-Insertion, as shown in (16):

- (16) (a) *njampu kapi-ŋa pura-mi wawiri*
(b) *wawiri kapi-ŋa pura-mi njampu*

Where a noun phrase is marked for case, by means of a phonologically constituted case ending, typically the inflection is attached to the noun phrase as a whole if the latter is still intact, as in (15b). But if a noun phrase is broken up, the case ending appears on each of its subparts, as in (17):

- (17) (a) *tjaŋtu-ŋku φ-tju yaŋku-ŋu wiŋi-ŋki*
dog-ergative φ-me bite-past big-ergative
(b) *wiŋi-ŋki φ-tji yaŋku-ŋu tjaŋtu-ŋku*
big-ergative φ-me bite-past dog-ergative

While an auxiliary is inserted to the right of a noun phrase, it is not inserted to the right of a sequence consisting of both a noun phrase (an object, say) and a verb. I take this to mean either that there is no verb phrase constituent in Walbiri or that, at the time Aux-Insertion applies, there is no such constituent. A verb and its nominal complement(s) do not form a constituent with respect to Aux-Insertion, nor can it be argued that they form a constituent for the purposes of the earlier operation of permutation. I will assume, therefore, that the verb and the complement are each dominated immediately by the S node, at least at this point in the derivation of sentences.

To summarize, the auxiliary is basically initial in Walbiri finite clauses. Since the most reasonable assumption about the insertion of person markers into the auxiliary is that it takes place prior to deletion or permutation of the noun phrases with which the auxiliary ultimately agrees, it follows that the auxiliary is in its original initial position at the time person marking is effected, for Aux-Insertion follows deletion and permutation.

3. SUBJECT PERSON MARKERS

I will begin the discussion of person marking proper with the simplest possible case, namely, simple intransitive sentences of the type represented by (3), in which the sole noun phrase constituent is the subject. The sentences of (3) are all instances of the first person singular, and the person marker /-ŋa/ appearing in the auxiliary can be said to agree with the subject pronoun /ŋatju/. Similarly, the person marker /-npa/ in the auxiliary of (18) can be said to agree with the second person singular pronoun /njuntu/:

- (18) *njuntu ka-ŋpa puŋa-mi*
you present-you shout-nonpast
'You are shouting; you shout'

The entire list of non-third person pronouns is given in (19), together with the corresponding suffixes for subject person agreement. I will henceforth refer to the person-marking suffixes as (pronominal) clitics. The numbers appearing to the left of the pronouns in (19) are glosses used for the sake of brevity. They are to be interpreted as follows: 1 'first singular', 2 'second singular', 11 'first dual exclusive', 12 'first dual inclusive', 22 'second dual', 111 'first plural exclusive', 122 'first plural inclusive', 222 'second plural'.⁸ (The hyphenation appearing within the 22, 111, and 222 clitics will be explained later, as will the parenthesized element in the 22 clitic.)

(19)	PRONOUN	SUBJECT CLITIC
1	<i>ŋatju(lu)</i>	<i>-ŋa</i>
2	<i>njuntu(lu)</i>	<i>-n(pa)</i>
11	<i>ŋatjara</i>	<i>-litjara</i>
12	<i>ŋali(-tjara)</i>	<i>-li</i>
22	<i>njumpala</i>	<i>-n(pa)-pala</i>
111	<i>ŋanimpa</i>	<i>-ŋa-lu</i>
122	<i>ŋalipa</i>	<i>-li-pa</i>
222	<i>njurula</i>	<i>-nku-lu</i>

Third person subject agreement is exemplified in the sentences in (20):

- (20) (a) *ŋarka ka puŋa-mi*
'The/a man is shouting'
(b) *ŋarka-tjara ka-pala puŋa-mi*
'(The) two men are shouting'
(c) *ŋarka-patu ka-lu puŋa-mi*
'(The) several men are shouting'
(d) *ŋarka ka-lu puŋa-mi*
'(The) men are shouting'

Third person singular agreement is represented by a zero in the auxiliary, third dual agreement by the clitic /-pala/, and third plural by /-lu/. Thus we have the clitics in (21):

⁸ The alternations /ŋatju ~ ŋatjulu/ in the 1 pronoun and /njuntu ~ njuntulu/ in the 2 pronoun are free in uninflected forms. The shorter alternant appears with the possessive suffix /-ŋaŋu/; the dative /-ku/ combines with either alternant, while the ergative /-lu/ regularly combines with the longer form, as do the locative /-la/ and comitative /-latjinta/. The alternation /ŋali ~ ŋalitjara/ in the 12 pronoun is free in all environments.

- (21) 3 zero
 33 -pala
 333 -lu

Four numbers are recognized for count nouns of the type represented by the subjects of (20a-d), namely, singular, dual, paucal, and plural.⁹ Paucal number (represented by the suffix /-patu/) is also possible for the non-third person pronouns (/ɲanimpa-patu/, /ɲalipa-patu/, and so on). However, the two plurals are not represented by distinct clitics in the auxiliary. In speaking of agreement, then, I will use the term "plural" to refer generally to both plural categories.¹⁰

The noun phrases in the sentences of (20) consist of nouns alone. The same facts of third person subject agreement could have been illustrated by means of subject noun phrases consisting of nouns together with determiners, as in (22), or of determiners alone, as in (23):

- (22) (a) *ɲarka ɲjanuɲu ka puɭa-mi*
 'The aforementioned man is shouting'
 (b) *ɲarka ɲjanuɲu-tjara ka-pala puɭa-mi*
 'The two aforementioned men are shouting'
- (23) (a) *ɲjanuɲu ka puɭa-mi*
 'The aforementioned one is shouting; he/she is shouting'
 (b) *ɲjanuɲu-tjara ka-pala puɭa-mi*
 'The aforementioned two are shouting; they (dual) are shouting'

Walbiri has a semantically rich system of determiners, but the categories which are relevant to third person subject agreement are limited to person and number as summarized in (21).¹¹

It would be a mistake to imply that a noun phrase with a nominal head always requires third person agreement. The noun phrases of (22) do in fact require such agreement but this is because the determiner /ɲjanuɲu/ 'the, the aforementioned' is strictly third person. Sentences like those in (24) are not only allowed, but fairly common:

⁹ For the most part, plural number is unmarked in nouns (that is, the singular and plural are identical), although a few nouns can reduplicate to mark the plural: *kuɖu* 'child', *kuɖukuɖu* 'children'; *kaɲta* 'woman', *kaɲtakaɲta* 'women'.

¹⁰ Noncount nouns, expectably, behave as singulars with respect to agreement:

payi ka paɲka-mi
 wind present run-nonpast
 'The wind is blowing'

¹¹ Walbiri indefinite determiners are /tjinta/ 'singular, one', /tjirama ~ tjirima/ 'dual, two', /wirkaɖu, maɲkurpa/ 'paucal, few, several', /panu/ 'plural, many'. Demonstratives (combinable with the suffixes /-tjara/ 'dual', /-patu/ 'paucal', and less frequently /-ra/ 'plural') are /ɲjampu/ 'this', /yalumpu/ 'that mid-distal, that near addressee', /yali/ 'that distal, removed from speaker and addressee', /yinja/ 'that ultra-distal'. Nondemonstrative definite determiners (also combinable with dual and paucal suffixes) are /ɲjanuɲu/ 'the, he/she/it, previously mentioned in discourse', /yaɲka/ 'the, he/she/it, evocative, the same', and /ɲula/ 'that, mentioned in prior clause or closely preceding sentence'. Interrogative determiners are definite /ɲjarpaɲa/ 'which' and indefinite /ɲana/ 'who', /ɲjiya/ 'what', /ɲjatjaɲu/ 'who/what nonsingular, how many'. This is not a complete inventory of Walbiri determiners. The glosses given here are to be regarded as approximate only.

- (24) (a) *ɲarka ka-ɲa puɭa-mi*
 man present-I shout-nonpast
 'I man am shouting'
 (b) *ɲarka ka-ɲpa puɭa-mi*
 man present-2 shout-nonpast
 'You man are shouting'
 (c) *ɲarka-tjara ka-ɭitjara puɭa-mi*
 man-dual present-11 shout-nonpast
 'We men (dual exclusive) are shouting'

I propose that it is the determiner, rather than the nominal, which determines the person of a given noun phrase and, further, that noun phrases consisting only of nouns are derived by deletion of a determiner (probably under conditions similar to those which allow for the deletion of pronouns in sentences of the type represented by (16)). According to this proposal, the subjects of (a), (b), and (c) of (24) are, abstractly, /ɲarka ɲatju/, /ɲarka ɲjuntu/, and /ɲarka ɲatjara/, respectively; and the pronouns /ɲatju/, /ɲjuntu/, /ɲatjara/ are determiners, strictly speaking. In fact, noun phrases of the form /ɲarka ɲatju/ 'I man', /yapa ɲatju/ 'I person', with retention rather than deletion of the determiner, are possible, albeit rare, in actual usage.¹²

This proposal extends, of course, to noun phrases of the type represented by the subjects of (20a-d): they are assumed to be derived by deletion of a third person determiner. It is arguable that some noun phrases consisting of a determiner alone are derived by deletion of the noun under identity with a noun in a prior clause. However, where no such source can be suggested, as is typically but not exclusively the case in non-third person noun phrases consisting solely of the pronoun (= determiner), some other provision must be made. At least two proposals come to mind. First, one might assume that the rules of the base allow a noun to be chosen optionally in the expansion of NP (that is, the rule expanding NP is roughly of the form NP → (N) Det, where "Det" is the node dominating determiners, including what are commonly referred to as pronouns). Alternatively, one might assume that both the noun and the determiner are obligatory but that some nouns are fully abstract (that is, phonologically vacuous) and therefore deleted in surface structures universally. I will not commit myself on either of these two proposals since I know of no clear evidence which bears on the issue. In any event, nothing would be lost in a discussion of Walbiri person marking by pretending that noun phrases consisted always and only of determiners if, as I have asserted, it is true that the categories which are expressed in pronominal clitics are also distinguished in determiners.¹³

¹² The demonstrative determiners /ɲjampu/ and /yalumpu/ can also be used as first and second person determiners, respectively.

¹³ Proper nouns and indefinite noun phrases typically appear without overt determiners in Walbiri. However, the definite /ɲjanuɲu/ 'the' can appear with proper nouns, and there is a set of indefinite determiners (see note 11) which might underlie indefinite noun phrases which appear in surface structures without overt determiners. In actual fact, a sentence like the following is ambiguously either definite or indefinite in isolation:

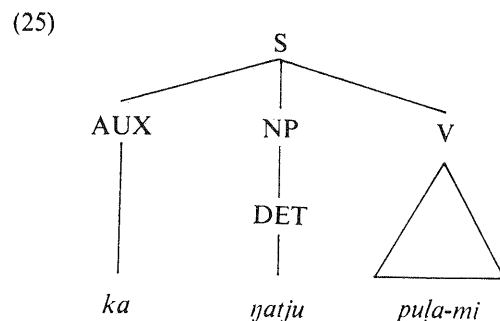
ɲarka ka puɭa-mi
 man present shout-nonpast

It is probably correct to view such sentences as resulting from the deletion of either a definite or indefinite determiner. The latter, like the so-called independent pronouns, appear overtly only under conditions of emphasis or the like.

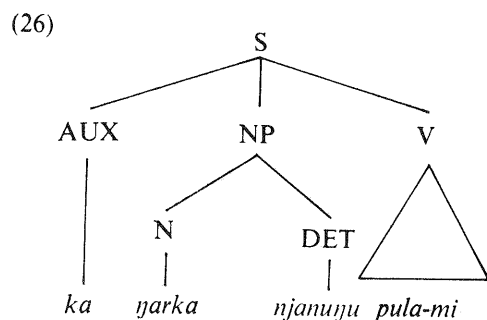
4. A PROVISIONAL THEORY OF WALBIRI PERSON MARKING

With this introduction it becomes possible to characterize, in rough outline, the form which simple intransitive sentences exhibit prior to the application of the agreement rules. The essential proposals are that the auxiliary, into which pronominal clitics are inserted, is initial, and that the subject noun phrase consists of at least a determiner.

The structure of sentence (3a) prior to agreement might be represented roughly as in (25):¹⁴



Similarly, the pre-agreement structure of (22a) (and of (20a), as well, on one of its readings) might be represented as in (26):



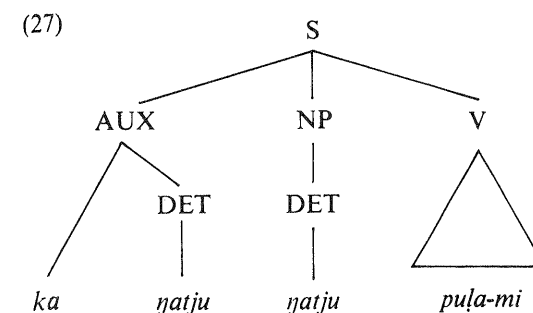
I will assume momentarily that these structures, and the general class which they represent, can reasonably be regarded as the objects over which agreement is defined, and I will turn now to the question of how agreement is to be stated in a formal grammar of Walbiri. I will not be able to comment in any substantive way on certain of the issues involved, but I will nonetheless be able to make a number of observations which help to select among theoretically possible competing alternatives.

An initially suggestive conception of agreement, which I will refer to as the "constituent-copying" alternative, holds that the pronominal clitics are direct duplicates of the determiners that appear in the noun phrases with which they are construed, differing only in their phonological realization (or "spelling"). Agreement is then accomplished by means of rules inserting determiner copies from the appropriate

¹⁴ I will continue to assume that there is no VP node or at least that it is irrelevant to the concerns of this paper. I will also not address myself to the question of the source of tense inflections on the verb.

noun phrases into the auxiliary and adjusting their phonological constituency in required ways.

In order to place into clear perspective certain important aspects of Walbiri person marking, I will consider this alternative in a strictly literal manner. Thus, for example, I will assume that a determiner copy which is inserted into the auxiliary (and, presumably, sister-adjoined to the auxiliary base) is an *exact* duplicate of the determiner in the noun phrase with which it is construed, including its phonological representation. Furthermore, I will assume that the phonological rules which readjust the spelling of Aux-dominated determiners are defined solely in terms of phonological matrices and their domination by categorical nodes (Det, Aux) and perhaps also in terms of their relative order positions within Aux. According to this literal interpretation, the effect of the copy rule on (25), for example, would be the derived structure (27):



Subsequently, a phonological readjustment rule would "respell" the Aux-dominated occurrence of /ŋatju/ as the clitic /-ŋa/.

Under the constituent-copying alternative as I have outlined it here, all person agreement is effected in this manner and all pronominal clitics are derived by respelling Aux-dominated determiner copies: /ŋatju/ → /-ŋa/, /ŋjuntu/ → /-ŋpa/, /ŋatjara/ → /-ŋitjara/, /njanuŋu/ → ϕ , /njanuŋu-tjara/ → /-pala/, and so on. The initial appeal of this analysis is that it incorporates, in a very concrete way, the basically correct observation that the determiner is the primary locus of the category of person. It accomplishes this by relating pronominal clitics *directly* to specific determiners, by identifying the former as phonological respellings of the latter. I will now attempt to show, however, that this direct identification of clitics with determiners is mistaken and that an adequate account of Walbiri person marking must be somewhat more abstract than the constituent-copying alternative under the strictly literal interpretation.¹⁵

That the relationship between pronominal clitics and determiners cannot be so simple and direct is shown, for example, by the behavior of conjoined noun phrases in agreement. Consider the forms in (28):

- (28) (a) *njuntu manu ŋatju ka-li puḷa-mi*
 you and I present-12 shout-nonpast
 'You and I are shouting'

(Continued)

¹⁵ It is, nevertheless, almost certain that there is historical reality in a concrete morphic identification between certain clitics and determiners. For example, the similarity between /ŋalipa/ '122' and the object clitic /-ŋalpa/ '122', or between /ŋanimpa/ '111' and /-ŋanpa/ '111' (which we mention later), is certainly not entirely accidental. A hypothetical account of the evolution of the Walbiri system of person marking, consistent with the existence of such similarities, will be suggested later.

- (b) *njuntu manu yali ka-n-pala puḷa-mi*
you and that present-22 shout-nonpast
'You and that one (removed) are shouting'
- (c) *ḡatju manu yali ka-liṡjara puḷa-mi*
I and that present-11 shout-nonpast
'That one and I are shouting'
- (d) *njampu manu yali ka-pala puḷa-mi*
this and that present-33 shout-nonpast
'This one and that one are shouting'

In none of the sentences of (28) can it be said that the pronominal clitic corresponds directly to a determiner present in the subject noun phrase. But in each sentence, in an intuitively clear sense, the clitic agrees in person and number with the subject noun phrase as a whole. The combination of /njuntu/ '2' and /ḡatju/ '1' in (28a) amounts to dual number and simultaneous first and second person (that is, "inclusive person," in the established terminology), and this is precisely the combination of categories expressed by the clitic /-li/ '12'. Exactly the same kind of analysis applies to the other data of (28) and to their logical extensions. While these data are consistent with the claim that determiners play the central role in determining the person of noun phrases in which they appear, they suggest that agreement in Aux is not with the person and number of individual determiners but rather with the person and number of whole noun phrases.¹⁶

The constituent-copying alternative would be a serious proposal for Walbiri agreement if it could be shown that the entire battery of operations involved in effecting agreement could, without loss of significant generalizations, be formulated in such a way as to avoid entirely any reference to the categories of person and number as abstract features of noun phrases and independent of their morphic realization. I see no obvious way in which the behavior of conjoined noun phrases can be accommodated in the constituent-copying alternative. But even assuming that conjoined noun phrases could be handled, the direct identification of clitics with determiners seems particularly misguided when one considers the total range of possible third person noun phrases. A rich variety of categories expressed in third person determiners are simply not reflected in the clitics of agreement. And in general, only the categories of person and number (and case) are directly relevant to agreement, regardless of any additional categories which might be expressed in the determiners of noun phrases with which the pronominal clitics are construed. This prevailing fact of Walbiri agreement constantly makes itself felt in any serious attempt to formulate a

¹⁶ There is some evidence which suggests that certain determiners, or independent pronouns, are provided by transformational rule subsequent to the insertion of lexical items into preterminal strings. For some if not all speakers of Walbiri, conjoined noun phrases, consisting of both nominal and pronominal conjuncts, may undergo a process which might be termed "conjunct absorption." In a conjoined expression of the type represented by /tjapaḡaḡi manu ḡatju/ 'Tjapangardi and I', the pronominal conjunct, together with the conjunction /manu/, may be replaced by a pronoun which embodies the person and number of the noun phrase as a whole: in this example the noun phrase as a whole is dual in number and first inclusive in person; hence, the subsequence /manu ḡatju/ 'and I' may be replaced by /ḡatjara/ '11'. This fact could be taken as establishing the existence of a rule which actually creates a pronoun and could conceivably be of significance in determining the proper analysis of Walbiri agreement in relation to conjoined expressions. One might, for example, propose that conjunction absorption is a necessary prior step in effecting agreement. Since the pronoun which is created by absorption embodies the correct person and number, one could argue that it is a copy of this composite pronoun which is inserted into the auxiliary. This proposal is somewhat weakened by the fact that both absorbed and unabsorbed pronominal conjuncts are allowed in Walbiri sentences, that is, absorption is optional. Nevertheless, the proposal will be briefly reconsidered later in the context of a comparison of the Walbiri system of person marking with that of Warramanpa.

determiner-copying transformation and a set of respelling rules for converting determiners into their ultimate clitic forms.

In short, the failure of the constituent-copying alternative, under the strictly literal interpretation, is in its inability to refer directly to the relevant grammatical categories of person and number. Because it allows reference only to constituents and their phonological constituency, it cannot account in any simple and direct fashion for the fact that morphologically and syntactically distinct noun phrases can behave identically with respect to agreement—for example, each of the following noun phrases is 'first person plural inclusive' and, accordingly, requires /-ḡipa/ '122' in subject agreement: /ḡalipa/ '122', /ḡatjara manu njuntu/ '11 and 2', /ḡatju manu njumpala/ '1 and 22', /ḡatjara manu njumpala/ '11 and 22', /ḡatju manu njurula/ '1 and 222', /ḡali manu yalumpu-tjara/ '12 and those two near', and so on.

The plausibility of the determiner-copying conception of Walbiri agreement would be further diminished if it could be shown that phonologically identical determiners allowed distinct forms of agreement, corresponding to differences in person or number not overtly expressed in the determiners themselves. This is apparently the case for some Walbiri determiners, although the relevant data are amenable to alternative analyses.¹⁷

Consider, for example, the case of number in third person determiners. Typically, the singular and plural numbers are unmarked, while dual and paucal numbers are marked, for example, /njampu/ 'this singular', /njampu-tjara/ 'these dual', /njampu-patu/ 'these paucal', /njampu/ 'these plural'. The singular and plural are identical, /njampu/, but the former requires singular agreement and the latter requires plural agreement. This state of affairs holds generally for the definite third person determiners. One could, of course, allow the respelling of Aux-dominated /njampu/ and all other unmarked definite third person determiners to be freely either zero or /-lu/, to be interpreted later as singular and plural, respectively. But, quite apart from the implied claim that the semantic interpretation of number follows the phonological respelling of certain formatives, this would yield strictly ungrammatical results in certain cases, as, for example, with a zero subject clitic in the auxiliary of a sentence whose verb requires a plural subject (/mati-/ 'to go in procession', for instance) or a zero subject clitic in agreement with a noun phrase whose head noun is specifically plural in form (as is possible for a few nouns, such as /kuḡu/ 'child', /kuḡukuḡu/ 'children'; /puḷka/ 'old man', /pulkapuḷka/ 'old men'). While the category of number may not be overtly distinguished in determiners, it is consistently distinguished in subject agreement. A similar situation exists in the case of person. Thus, the determiners /njampu/ 'this' and /yalumpu/ 'that near' are used not only as third person demonstratives but as, respectively, first and second person demonstratives as well. In the latter case, they

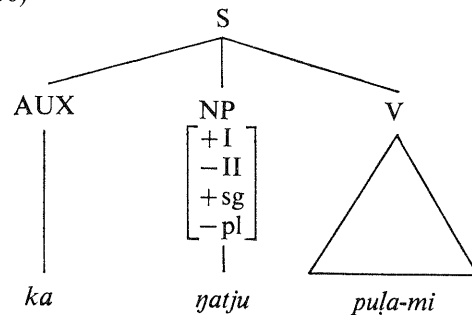
¹⁷ In the case of identity between singular and plural determiners in Walbiri, one could, for example, argue that plural determiners are in fact overtly marked (and therefore distinct from singulars) by the suffix /-ra/ (see note 11) but that this suffix is optionally (and preferably) deleted, resulting in superficial morphological identity between singular and plural. I doubt whether this remedy will work in general, however. In Walmanpa, one of Walbiri's neighbors to the east, the category of number is normally totally unmarked in independent pronouns. While dual number can be marked by the suffix /-tjara/, optionally, I know of no overt marker for plural number in independent pronouns. In general, in Walmanpa sentences, the independent pronoun is noncommittal with respect to number, while the corresponding pronominal clitics mark the same categories of number as do their Walbiri cognates. Thus, /ḡayu/, the first person pronoun, can be said properly to "agree" with any of the subject pronominal clitics /-ḡa/ '1', /-tja/ '11', /-li/ '12', /-ḡa-lu/ '111', and /-lpa-lu/ '122'. And similarly, /njuntu/, the general second person pronoun, can be said to agree with the clitics /-n/ '2', /-npala/ '22', and /-nkulu/ '222'. I have heard at least one Walmanpa speaker carry this practice over into her Walbiri speech, allowing /ḡatju/ to agree with /-ḡa-lu/, for example.

I am grateful to the late Jack Walker (of Warrabri, N.T.) and to Donald Spencer (of Tennants Creek, N.T.) for information on Walmanpa.

I propose that the agreement rule in Walbiri copies the person and number features into the auxiliary from the NP node which exhaustively dominates the noun phrase with which the auxiliary agrees. The rule does not copy an actual constituent but rather a bundle of features. I will refer to this conception of Walbiri agreement as the "feature-copying" alternative. The remainder of this discussion will be devoted to further exemplification of the fact that Walbiri agreement requires direct reference to the categories of person and number.

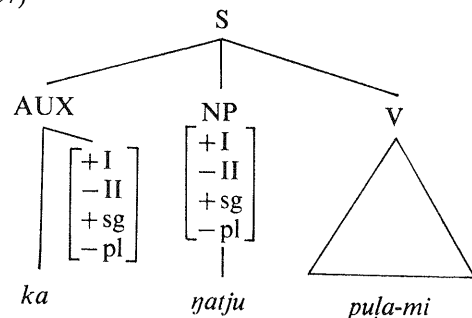
While the feature-copying alternative does not involve the duplication of an actual constituent, it must be formulated in such a way as to create a constituent in the auxiliary, for it is a fact that the person markers appear as a sequence of clitics following the auxiliary base, and, as I will show later, some of the clitics are subject to reordering. I am not sure how this fact should be represented formally, but I will assume that the feature-copying operation simply creates a constituent in the appropriate position in the auxiliary and, therefore, that what appears only as an assemblage of features in the noun phrase is an actual constituent in the auxiliary. Under this revised conception of agreement, the pre-agreement structure of sentence (3a) will be represented roughly as in (36):

(36)



After agreement, it will appear roughly as in (37):

(37)



Ultimately, the Aux-dominated abstract constituent [+I, -II; +sg, -pl] will be spelled /-ŋa/. The feature-copying alternative specifically denies that the pronominal clitics are merely alternants of determiners. And, assuming that determiners are entered in the lexicon, the feature-copying alternative asserts that the phonological shapes of pronominal clitics, derived by means of rules which spell abstract constituents, are not related by rule to the phonological shapes of determiners. It is consistent with this alternative that while some morphological identifications can be

made between subparts of determiners and subparts of clitics (for example, the sequence /-tjara/ appears in the determiner /ŋatjara/ '11' and the corresponding clitic /-litjara/), by and large such identifications are highly irregular and often extremely tenuous. It is questionable whether they play any role whatsoever in the synchronic grammar of Walbiri. By contrast, there are morphological identifications among the clitics themselves which are synchronically valid. The second and third person subject clitics share morphological material: the category of number is represented identically in the two sets, as we see in (38):

(38) SECOND PERSON	THIRD PERSON	
-n(pa)	zero	singular
-n(pa)-pala	-pala	dual
-nku-lu	-lu	plural

The first person plural exclusive clitic is subject to a similar subanalysis: /-ŋa-lu/. By inspection alone it is reasonable to suggest that /-pala/ and /-lu/ here mark dual and plural number, respectively. But it is possible to show further that the bipartite analysis of these particular clitics is synchronically real and must therefore be provided by the rules which give concrete phonological shape to the pronominal clitics; that is, the rules must provide that each of the nonsingular clitics here consist of a person marker (phonologically null in the case of the third person) followed by a number marker.

It is tempting to suggest that the remaining first person nonsingular clitics, /-litjara/ '11', /-li/ '12', and /-lipa/ '122', are amenable to subanalysis as well, since they clearly share the subportion /-li/. This may be etymologically correct, but a bipartite analysis in this case is not synchronically justifiable since the subparts do not function as separate units in connection with any later morphological operation.

That the subanalysis of clitics given in (38) is correct is shown in part by the fact that the subsequence identified with person in the second person forms can be manipulated separately from the subsequence identified with number. Let us assume that the second person subject clitics, prior to their ultimate spelling, have an abstract bipartite structure as in (39):

(39)	$\begin{bmatrix} -I \\ +II \end{bmatrix}$	$\begin{bmatrix} +sg \\ -pl \end{bmatrix}$	2
	$\begin{bmatrix} -I \\ +II \end{bmatrix}$	$\begin{bmatrix} -sg \\ -pl \end{bmatrix}$	22
	$\begin{bmatrix} -I \\ +II \end{bmatrix}$	$\begin{bmatrix} -sg \\ +pl \end{bmatrix}$	222

All three forms in (39) share, abstractly, an identical initial subconstituent marking second person which is later spelled as one or another of the alternants /-n(pa)/, /-nku-/, depending on what follows it. Notice that singular number is also given an abstract feature representation in (39), but it does not receive concrete phonological realization. This entails a rather strong claim, which may be entirely mistaken, namely, that singular number is marked in Walbiri. Since singular number is nowhere overtly marked by separately identifiable morphological material, it may be incorrect to assume that singular forms should be identified as being singular in number. It may be the case, rather, that the observation that singular number is never overtly marked in Walbiri is a true linguistic fact and that singular number is determined for a particular form by the *absence* of either dual or plural number. This is an issue which I

simply cannot address meaningfully at this point, and I will assume that some zeros do in fact have underlying feature assemblages. I will therefore consider the analysis in (39) to be correct for Walbiri second person subject clitics at a point in their derivation prior to their ultimate phonological spelling.

It is appropriate to extend this assumption about morphological zeros to the third person subject clitics as well, attributing to them an abstract, prephonological morphology exactly parallel to that of the second person forms, as shown in (40):

$$(40) \begin{array}{l} \begin{bmatrix} -I \\ -II \end{bmatrix} \begin{bmatrix} +sg \\ -pl \end{bmatrix} \quad 3 \\ \begin{bmatrix} -I \\ -II \end{bmatrix} \begin{bmatrix} -sg \\ -pl \end{bmatrix} \quad 33 \\ \begin{bmatrix} -I \\ -II \end{bmatrix} \begin{bmatrix} -sg \\ +pl \end{bmatrix} \quad 333 \end{array}$$

In the clitics in (40), of course, both the initial abstract constituent $[-I, -II]$ and the singular number marker $[+sg, -pl]$ are phonologically vacuous. Other conceptions of the third person clitics are possible, to be sure, but nothing is lost by assuming that their structure parallels (39).

Returning to the original theme, it is possible to show that the analysis of second person subject clitics as represented in (39) is synchronically valid by considering, for one thing, their behavior in the imperative:

- (41) (a) *pu!a-ya* ϕ
shout-imperative imperative
'Shout! (you sg)'
(b) *pu!a-ya* ϕ -*pala*
shout-imperative imperative-dual
'Shout! (you dual)'
(c) *pu!a-ya* ϕ -*lu*
shout-imperative imperative-plural
'Shout! (you pl)'

The imperative auxiliary, like certain other aspectually definite auxiliaries (see the sentences of (4)), has a zero base (ϕ) to which the personal clitics are attached. Furthermore, like the other auxiliaries, the imperative is subject to the Aux-Insertion Rule. What is of interest in (41), however, is the shape of the personal clitics: they consist of the number markers alone; the initial portion, marking second person, is absent. It appears, therefore, that Walbiri, like so many other languages of the world, has a rule which deletes the second person subject in an imperative. But it is interesting to note that it is only the second person subject *clitic*, not the second person subject *noun phrase* (that is, determiner) which is deleted in forming imperatives. The deletion of the subject noun phrase, if there is a deletion, appears to be governed by considerations of emphasis and the like, just as in the case of the other so-called independent pronouns. That is to say, imperatives in which the second person subject noun phrase is still present are not only well-formed but even frequent. But whether or not the subject noun phrase is itself deleted, the second person subject clitic is obligatorily deleted, as shown in (42):

- (42) (a) *njuntu* ϕ *pu!a-ya*
you imperative shout-imperative
'You shout!'
(b) *njumpala* ϕ -*pala* *pu!a-ya*
you imperative-dual shout-imperative
'You two shout!'

- (c) *njurula* ϕ -*lu* *pu!a-ya*
you imperative-plural shout-imperative
'You plural shout!'

There are several ways in which this could be accommodated in a grammar of Walbiri. I will consider two very briefly. One alternative would be to allow the deletion rule to apply when the clitics are in place and in the abstract form given in (39). The rule would simply delete the initial constituent, that is, the second person marker $[-I, +II]$. This would give the correct result in all cases. Another alternative would be to switch the feature $[+II]$ to $[-II]$ in the second person determiners prior to agreement, that is, prior to the application of the rule which copies person and number features into the auxiliary. This would leave the determiners unaffected phonologically since presumably their shapes are already specified in the lexicon, but it would cause them to behave like third person forms with respect to agreement: the clitics would be identical in form to third person clitics, which is in fact the case observationally. The second alternative is initially appealing because it accounts for the morphological identity between second person imperative subject clitics and third person subject clitics, but it would be a possible analysis only if, after agreement, the imperative subject clitics consistently behaved like their morphologically identical third person counterparts, that is, if the category of person were totally neutralized between them. There appear to be circumstances in which it is necessary to appeal to the category of second person in the imperative clitics, although the data are not altogether clear (we shall return to this). In any event I will assume that the first alternative, namely, that which assumes deletion of the initial portion of the second person clitic in an imperative auxiliary, is the correct analysis.

Walbiri imperatives show not only that the subanalysis of second person subject clitics is synchronically real but also that the categories of person and number must be referred to in the derivation of pronominal clitics. This is so regardless of which analysis of the imperative is adopted since any version will be required to make direct reference to second person. To this extent, the behavior of imperatives is more consistent with the feature-copying alternative of agreement than with the constituent-copying alternative strictly interpreted.

6. PERSON MARKING IN TRANSITIVE CLAUSES

I would like now to turn to agreement within simple transitive sentences. In such cases the auxiliary contains both subject and object clitics, and their treatment lends further strength to the observation that an adequate account of Walbiri agreement must permit reference to the categories of person and number.

In true transitive sentences in Walbiri, the subject noun phrase, whether it is "pronominal" (that is, a determiner alone) or nominal, is inflected for ergative case, by means of a suffix $/-\eta ku \sim -lu/$.¹⁸ However, the subject clitics in transitive sentences

¹⁸ The alternant $/-\eta ku/$ combines with disyllabic stems, $/-lu/$ with stems longer than disyllabic: thus, $/\etaarka-\eta ku/$ 'man-ergative' but $/\etaanimpa-lu/$ '111-ergative'. The disyllabic demonstrative determiners are exceptions to this rule, as are the indefinite nonhuman interrogative determiner $/njiya/$, the manner pro-form $/kutja/$ 'thus', and the manner interrogative $/njarpa/$ 'how'. The indefinite interrogative $/\eta ana/$ 'who' is not exceptional in Western Walbiri, but the corresponding $/njana/$, found in the speech of some Eastern Walbiris, is. These exceptional forms take the alternant $/-lu/$ instead of the expected $/-\eta ku/$.

The term "disyllabic" must be understood as excluding forms in which one of the vowels is long: that is, a long vowel counts as two syllables for the purposes of the distribution of ergative alternants (thus $/\eta u:rpa-lu/$ 'throat-ergative', not $*/\eta u:rpa-\eta ku/$).

are the same as those listed in (19) and (21). Object noun phrases in transitive sentences, again whether pronominal or nominal, are unmarked for case (as are the subjects of intransitive sentences), but the corresponding clitics are different in shape from the subject clitics. The complete list of object clitics appears in (43) (where parenthetical alternants for 12 and 222 are idiolectal and dialectal, respectively):

- (43)
- | | |
|-----|--------------------|
| 1 | -tju |
| 2 | -ŋku |
| 3 | zero |
| 11 | -tjaranŋku |
| 12 | -ŋaliŋki (~ -ŋali) |
| 22 | -ŋku-pala |
| 33 | -palaŋu |
| 111 | -ŋanpa |
| 122 | -ŋalpa |
| 222 | -njara (~ -njura) |
| 333 | -tjana |

Only one of the clitics, namely, /-ŋku-pala/ '22' can be subanalyzed synchronically. That is to say, the hyphenation corresponds to a morphologically justifiable segmentation in this form, while suggestive and perhaps etymologically correct segmentations in certain of the other nonsingular forms cannot be justified on synchronic grounds.

With an exception to be detailed later, the order of clitics is subject-object, as shown in (44):

- (44) (a) *ŋatjulu-lu ka-ŋa-ŋku ŋjuntu nja-nji*
I-ergative present-1-2 you see-nonpast
'I see you'
- (b) *ŋjuntulu-lu ka-npa-tju ŋatju nja-nji*
you-ergative present-2-1 me see-nonpast
'You see me'
- (c) *ŋalipa-lu ka-ŋipa-tjana wawiri-patu nja-nji*
we-ergative present-122-333 kangaroo-paucal see-nonpast
'We (plural inclusive) see the several kangaroos'

The exceptions to this linear ordering constitute the principal synchronic justification for the subanalysis of certain of the nonsingular pronominal clitics. Whenever a subject clitic which is analyzable into a person marker followed by one of the number markers /-pala/ 'dual' or /-lu/ 'plural' precedes one of the object clitics /-tju/ '1' or /-ŋku/ '2', the number marker follows rather than precedes the object clitic, as in (45):

- (45) (a) *ŋanimpa-lu ka-ŋa-ŋku-lu ŋjuntu nja-nji*
we-ergative present-1-2-plural you see-nonpast
'We (plural exclusive) see you singular'
(*... ka-ŋa-lu-ŋku...)
- (b) *ŋjumpala-lu ka-npa-tju-pala ŋatju nja-nji*
you-ergative present-2-1-dual me see-nonpast
'You two see me'
(*... ka-n-pala-tju...)
- (c) *ŋarka-tjara-lu ka-zero-tju-pala ŋatju nja-nji*
man-dual-ergative present-3-1-dual me see-nonpast
'The two men see me'
(*... ka-zero-pala-tju...)

Notice that this does not happen when the object is represented by a clitic other than /-tju/ or /-ŋku/, as in (46):

- (46) *ŋjumpala-lu ka-n-pala-tjana wawiri-patu nja-nji*
you-ergative present-2-dual-333 kangaroo-paucal see-nonpast
'You two see the several kangaroos'
(**ŋjumpala-lu ka-npa-tjana-pala wawiri-patu nja-nji*)

I will assume that the basic order of clitics is subject-object but that a special metathesis rule applies to shift a number marker /-pala, -lu/ from the subject clitic to the right of an immediately following object clitic /-tju/ or /-ŋku/. The rule applies not only where the object is first or second person singular but also where it is second person plural /-ŋku-pala/. Thus the underlying subject-object sequence */-ŋa-lu-ŋku-pala/ '1-plural-2-dual' (that is, 111 acts on 22) is converted to /-ŋa-ŋku-lu-pala/ '1-2-plural-dual'. This attests to the reality of the subanalysis of the second person dual object clitic.

Given the subject and object clitics as listed and the metathesis rule, there is only one additional strictly morphological detail which must be accommodated to derive correct surface forms for subject-object clitic sequences, namely, the shape of the second person subject marker /-n(pa) ~ -nku/. This is always /-nku-/ when in combination with the plural marker /-lu/, even when separated therefrom as a result of metathesis. Thus, we have (47):

- (47) *ŋjurula-lu ka-nku-tju-lu ŋatju nja-nji*
you-ergative present-2-1-plural me see-nonpast
'You plural see me'

But in singular and dual forms the second person subject marker is alternately /-n-/ or /-npa/, depending on what follows. In the singular, it is /-npa/, except before the third dual object clitic /-palaŋu/ '33', where it is /-n-/ (thus, /-n-palaŋu/ '2 acts on 33'). In the dual it is /-n-/ except before the clitic /-tju/ inserted by metathesis, where it is /-npa-/ (thus, /-npa-tju-pala/ '2-1-dual' (that is, 22 acts on 1), as in (45b)).¹⁹

While the strictly morphological facts of subject-object clitic sequences are covered by the remarks just made, this by no means covers everything relevant to sequences of subject and object clitics in the auxiliary. It is not the case that clitic sequences correspond exactly to the possible co-occurrences of subject and object noun phrases. Thus, while it is possible of course to have a dual subject and a dual object in a given transitive sentence, it is not possible, in the auxiliary, to have subject and object clitics which are both of dual form (that is, of a form glossed as dual in the listings here).

In general, not all sequences of clitics are possible. Instead, an adjustment is made within the auxiliary to derive the possible sequences, and as a result a given clitic may disagree, with respect to the category of number, with the noun phrase with which it is construed. This makes a direct equivalence between clitics and determiners highly implausible. Moreover, the correct selection of clitics will require direct reference to the categories of person and number.

In discussing clitic sequences, I will make reference to two dialects which I will term, perhaps inexactly, Eastern (represented in my data by speakers from Warrabri,

¹⁹ The /-pa/ associated with alternants of the second person clitic is a residue from a once productive phonological rule which augmented word-final consonants. The same augment is now an inseparable part of such lexical items as, among many others, /tjaŋanpa/ 'possum', /tjukurpa/ 'dream-time', /tjintirtjintirpa/ 'willy-wagtail' (see Hale (to appear)).

N.T.) and Western (represented by speakers from Yuendumu, N.T.). The more complex and possibly historically prior treatment is the Western one. It is convenient, therefore, to begin with the Eastern treatment.

In both dialects, the essential fact is that a clitic of dual form is replaced by a clitic of plural form under certain circumstances. I will use the term "basic form" whenever the form of a clitic agrees with its semantic reading (or, equivalently, when it agrees in number with the noun phrase with which it is construed). Semantically singular and plural clitics are always in their basic forms; only duals undergo replacement. A dual subject clitic is always in its basic form when it is alone in the auxiliary (that is, in a simple intransitive sentence). Furthermore, a dual subject clitic always appears in its basic form if the object is singular, and a dual object clitic always appears in its basic form if the subject is singular. Only in combinations of nonsingular subject and object does a basically dual form undergo replacement.

In Eastern Walbiri, the rule according to which a dual clitic is replaced by a plural clitic is extremely simple and straightforward. If both the subject and object are nonsingular, only plural clitics are allowed. Thus, a dual subject clitic is replaced by the corresponding plural clitic (keeping person constant) if the object is either dual or plural, and a dual object clitic is replaced by the corresponding plural clitic if the subject is either dual or plural. For example, the basic sequence 11-22 (first dual exclusive acts on second dual) is replaced by 111-222, as in (48):

- (48) *ɲatjara-lu ka-ɲa-lu-njara njumpala nja-nji*
 we-ergative present-111-222 you see-nonpast
 'We two see you two'

While the basic 11 subject clitic is /-litjara/, it is replaced by /-ɲa-lu/ '111' in (48), and while the basic 22 object clitic is /-ɲku-pala/, it is replaced by /-njara/ '222' in (48), despite the fact that the clitics are construed with the dual noun phrases /ɲatjara/ '11' and /njumpala/ '22'.

Similarly, in (49) basic 33-333 (third dual acts on third plural) is replaced by 333-333:

- (49) *maliki-tjara-lu ka-lu-tjana wawiri-patu nja-nji*
 dog-dual-ergative present-333-333 kangaroo-paucal see-nonpast
 'The two dogs see the several kangaroos'

While the basic 33 subject is /-pala/, it is replaced by /-lu/ '333' in (49), although it is construed with a dual subject noun phrase.

The neutralization of nonsingular subject-object clitic sequences by replacement of all dual clitics with plurals is consistently applied in Eastern Walbiri, so far as I am aware; it is also the rule in the neighboring Walmanpa and Warramunga languages, which, like Walbiri, use pronominal clitics.

It is appropriate, I feel, to look upon the Eastern Walbiri treatment of nonsingular clitic sequences as a neutralization in the category of number. Assuming that the correct combinations are derived by means of a rule which actually replaces dual clitics by the corresponding plural clitics under some circumstances, it is clear that the category of number, as such, plays a direct role in the derivations. The category of person is also involved, but only indirectly: the replacements must keep the category of person constant. In Western Walbiri, the category of person plays a more important role. The replacement of dual clitics by plurals is not general in nonsingular subject-object clitic sequences; rather, it is conditioned in part by the persons involved.

The situation in Western Walbiri is somewhat complicated by the fact that the Eastern usage is accepted by most if not all speakers. This makes it difficult to determine the principles which underlie the strictly Western usage in those cases in which it differs from the Eastern. A considerable amount of study of the matter has revealed a pattern, nonetheless. As I understand it, a dual clitic may co-occur with a plural clitic. That is, if the subject is plural, a dual object clitic may appear in its basic dual form; and if the object is plural, a dual subject clitic may appear in its basic dual form. In fact, this is preferable to replacement. Thus, in Western Walbiri the sequence of clitics in (49) could, and preferably would, appear as the basic 33-333, that is, as /-pala-tjana/.

Where replacement becomes obligatory is in an auxiliary in which both the subject and object are dual. But even here it is not the case that both duals are replaced by plurals. Rather, it appears that only one of the duals is replaced by the corresponding plural, and the principle which governs the replacement is based upon a ranking of persons: 1 higher than 2 higher than 3. In a given combination of dual clitics, the higher ranking clitic remains in its basic form while the lower ranking clitic is replaced. For example, if a first person dual subject co-occurs with a second person dual object, only the dual object clitic (/ɲku-pala/ '22') is replaced by the corresponding plural /-njara/ '222'. Thus, the sequence of clitics in (48) would appear as /-litjara-njara/ in Western Walbiri. And if a second person dual subject occurs with a first person dual object, only the dual subject clitic (/n(pa)-pala/ '22') is replaced by the corresponding plural clitic (/nku-lu/ '222'), as in (50):

- (50) *njumpala-lu ka-nku-lu-tjaraɲku ɲatjara nja-nji*
 you-ergative present-222-11 us see-nonpast
 'You two see us two'

Similarly, basic 11-33 is replaced by 11-333, basic 33-11 is replaced by 333-11, basic 12-33 by 12-333, basic 33-12 by 333-12, basic 22-33 by 22-333, and basic 33-22 by 333-22.²⁰ If both the subject and object are third person dual, it is, of course, possible to follow the Eastern Walbiri usage and to replace both dual clitics by plurals; however, it is also possible to replace only one of them. It appears, in fact, that a ranking among third persons must also be recognized. To the extent that I have been able to observe it adequately, ranking among third persons depends upon the relative prominence or importance, in a given discourse or narrative, of the characters to whom the clitics refer. A dual clitic referring to a pair of characters who are the primary ones in a given narrative retains its basic form, while a dual clitic referring to secondary characters is replaced.²¹ Thus, in an epic about two snake personalities (the primary characters), a pronominal clitic referring to them appears consistently in its basic dual form. When the two snakes are seen by a pair of women gathering mulga seed (secondary characters), the basic dual subject clitic, referring to the women, is replaced by the corresponding plural. Thus, basic 33-33 is replaced by 333-33 (that is, by /-lu-palaɲu/), as in (51):

²⁰ In my field notes I have recorded a sequence /-pala-njara/ '33-222' for basic 33-22. This violates the ranking principle. If it is not a mistake in my recording, then I have no explanation for it.

²¹ This is not unlike the principle of obviation found in the Algonquian languages of North America. However, the Walbiri data are by no means as clear as the Algonquian case. It could well be that my understanding of the Walbiri facts is entirely mistaken, particularly in view of the fact that I did not devote a great deal of time to studying actual usage with regard to this particular aspect of Walbiri grammar.

- (51) *kaṅṅa-tjara-lu lpa-lu-palaṅu nja-ṅu waṅa-tjara*
 (woman-dual-ergative past-333-33 see-past snake-dual)
 'The two women saw the two snakes'

But when the snakes attack and eat the women, the subject clitic, referring to the snakes, retains its basic form, while the object clitic, referring to the women, is replaced. Thus, basic 33-33 is replaced by 33-333 (that is, by /-pala-tjana/), as in (52):

- (52) *waṅa-tjara-lu lpa-pala-tjana ṅa-ṅu kaṅṅa-tjara*
 snake-dual-ergative past-33-333 eat-past woman-dual
 'The two snakes ate the two women'

This concludes the discussion of (nonreflexive) subject-object clitic sequences. It seems abundantly clear that their correct derivation requires reference to the categories of person and number and, further, that virtually nothing is to be gained by regarding pronominal clitics as alternants of determiners.

I would like now to return briefly to the behavior of second person clitics in the imperative. Recall that the second person subject clitics in imperatives are identical in form to the third person subject clitics, which are listed in (53):

- (53) zero singular
 -pala dual
 -lu plural

As suggested earlier, one conceivable way of accommodating this fact is to permit the clitics to be marked as third person, that is, as [-I, -II]. This would be possible if they behaved like true third person forms throughout their Aux-internal derivations. There is some evidence, however, suggesting that they do not. So far as I can tell, they behave like second person forms with respect to the ranking detailed earlier for Western Walbiri; that is to say, they consistently rank higher than third person. If this is true, a natural way to handle the imperative clitics would be to adopt the analysis according to which they have the underlying abstract structure given in (39), like any other second person subject clitic, and to allow the initial subconstituent, that is, the second person marker [-I, +II], to be deleted subsequent to the readjustment of dual number which must make reference to the category of person. This weakly supports the deletion hypothesis for imperatives, as opposed to the feature-changing hypothesis.

7. OTHER CLITIC SEQUENCES

Simple intransitive and transitive sentences provide sufficient material to illustrate the essential facts of Walbiri agreement. It seems appropriate, however, to include other sentence types in this discussion.

There is a class of verbs whose members are basically intransitive, in the sense that their subjects are in the unmarked or absolutive (as opposed to the ergative) case, but which can take dative complements. A noun phrase functioning as the complement of such a verb is especially marked for dative case by means of the suffix /-ku/, as in the sentence in (54):

- (54) *ṅatju ka-ṅa-ṅku njuntu-ku waṅka-mi*
 I present-1-2 you-dative speak-nonpast
 'I am speaking to you'

Agreement in such sentences is exactly as in true transitive sentences of the type discussed earlier, with the exception that there is a special clitic for third person singular dative complements, namely, /-la/, as in (55):

- (55) *ṅatju ka-ṅa-la ṅarka-ku waṅka-mi*
 I present-1-3 man-dative speak-nonpast
 'I am speaking to the man'

Except for the third person singular, the dative object clitics are identical to the object clitics listed in (43).

The class of predicators which accept dative complements includes not only intransitive verbs but nonverbal predicators as well, as illustrated in (56):

- (56) (a) *ṅatju φ-ṅa-la njampu-ku wiṛi*
 I stative-1-3 this-dative big
 'I am big to (i.e., by comparison with) this one'
 (b) *ṅatju φ-ṅa-la njampu-ku kiḍanjanu*
 I stative-1-3 this-dative father
 'I am father to this one'

Nonverbal predicates require what I will refer to as the "stative" auxiliary, whose base is phonologically null. The stative auxiliary differs from others only in that it may be deleted from main clauses. Thus, the sentences of (56) can also appear as in (57):

- (57) (a) *ṅatju njampu-ku wiṛi*
 (b) *ṅatju njampu-ku kiḍanjanu*

But when the stative auxiliary is present, it takes pronominal clitics in the same way as does the auxiliary in a finite clause.

There is a small class of transitive verbs (that is, verbs whose subjects are ergative) which require both a direct object and an indirect object. A noun phrase functioning as the direct object of such a verb is in the absolutive case, while a noun phrase functioning as the indirect object appears in the dative. Only the subject and indirect object are represented by clitics in the auxiliary. I illustrate in (58):

- (58) (a) *ṅatjulu-lu ka-ṅa-ṅku kaḷi yi-ṅji njuntu-ku*
 I-ergative present-1-2 boomerang give-nonpast you-dative
 'I am giving you a boomerang'
 (b) *ṅatjulu-lu kapi-ṅa-la kaḷi punta-ṅi kuḍu-ku*
 I-ergative future-1-3 boomerang take-nonpast child-dative
 'I will take the boomerang away from the child'

In (a) and (b) of (58), the direct objects are third person singular; the corresponding clitics would be phonologically null here in any event. But even if the direct object were, say, third person dual (whose clitic is normally /-palaṅu/), it would still not be represented by a pronominal clitic in a "double transitive" sentence of the type represented in (58). Compare, for example, (59):

- (59) *ṅatjulu-lu kapi-ṅa-ṅku kaḷi-tjara punta-ṅi njuntu-ku*
 I-ergative future-1-2 boomerang-dual take-nonpast you-dative
 'I will take the two boomerangs away from you'

The fact is, apparently, that there is a constraint upon clitic sequences to the effect that a phonologically constituted direct object clitic cannot co-occur with a

dative clitic. The third dual object clitic /-palaŋu/ is suppressed in (59) to conform with this constraint. Normally, if a direct object has a corresponding phonologically constituted pronominal clitic, the latter *must* appear in the auxiliary; but in sentence (59) this requirement is in conflict with the constraint on clitic sequences. Where the direct object is inanimate, apparently, a clitic may be suppressed, as in (59); but where the direct object is animate, a phonologically constituted clitic may not be suppressed. This yields an irresolvable conflict in the case of certain sentences of the type presently under discussion, accounting for the ill-formedness of such strings as those in (60):

- (60) (a) **ŋarka-ŋku kapi-zero-ŋki-tji njuntu punta-ŋi ŋatju-ku*
man-ergative future-3-2-1 you take-nonpast me-dative
(b) **ŋarka-ŋku kapi-zero-tji njuntu punta-ŋi ŋatju-ku*
man-ergative future-3-1 you take-nonpast me-dative
'The man will take you from me'

Sentence (60a) is ill-formed because it violates the constraint on clitic sequences within the auxiliary, and sentence (60b) is ill-formed because it violates the requirement that animate objects whose corresponding clitics are phonologically constituted (in this case, /-ŋku/ is the clitic for the object noun phrase /njuntu/ 'you') actually be represented by a clitic in the auxiliary. Notice that the ill-formedness of (60a,b) cannot be handled simply by saying that a verb of the double transitive type cannot take animate direct objects since (61) is perfectly grammatical:

- (61) *ŋatjulu-lu kapi-ŋa-ŋku kaŋa punta-ŋi njuntu-ku*
I-ergative future-1-2 woman take-nonpast you-dative
'I will take the woman from you'

The object is animate in (61), but since it is third person singular, its corresponding direct object clitic is phonologically null and, therefore, does not violate the constraint on clitic sequences.²²

To summarize, there is a constraint which would appear to limit clitic sequences to two members, subject-object. In cases where a sentence contains two object noun phrases (using "object" loosely here to refer both to direct and indirect), only one may be represented in the auxiliary by a phonologically constituted clitic, and this is

²² D. Perlmutter has studied constraints on clitic sequences in Spanish and French (Perlmutter (1971)). He argues that the theory of grammar must allow constraints on surface structure, and he shows that certain limitations on clitic sequences, in Spanish, for example, can be explained only in this way. The Walbiri data, provided they are correct, furnish an additional example in support of Perlmutter's proposal. Certain Walbiri deep structures, which are themselves well-formed, are prevented from receiving surface realization because clitic sequences which they require are, in fact, impossible on the surface.

I feel, however, that it is wise in this connection to appeal to the caution which I mentioned in the first note to this paper. In working on a language radically different from one's own, the possibility of mistakes in primary data is extremely great. In this instance, it could conceivably be the case that the true constraint is a deep structure one which disallows non-third person direct objects in sentences in which a dative also appears. This seems unlikely in view of the fact that datives can arise from a considerable variety of sources, making it extremely difficult, if not impossible, to formulate the constraint. That it is not a deep structure constraint could be proven by showing that non-third person direct objects are permitted to co-occur with datives in infinitive clauses, that is, in clauses which lack auxiliaries and therefore pronominal clitics. My understanding is that such infinitive clauses are grammatical, but I could very easily be mistaken.

In any event, I wish to indicate my indebtedness to D. Perlmutter for several discussions of this material which have helped me to understand its potential significance.

consistently the noun phrase which is in the dative case (that is, the indirect object, in the cases examined here).

This is correct as far as it goes, but it would be incorrect to leave the impression that only two clitics (a subject and an object) may appear in a given auxiliary. In fact, three may appear: a sequence of subject followed by dative object may be further extended by the clitic /-la/. This may arise in one of several ways, two of which I will examine.

There is at least one transitive verb in Walbiri which requires a dative object rather than the usual absolutive object. This is illustrated in (62):

- (62) *ŋatjulu-lu ka-ŋa-la kaŋi-ki wari-ŋi*
I-ergative present-1-3 boomerang-dative seek-nonpast
'I am looking for a boomerang'

It is always possible in transitive sentences to include a benefactive noun phrase as well as the object. This noun phrase appears in the dative case and requires a dative clitic in the auxiliary. Of course, such sentences must conform to the constraint on clitic sequences whereby only the dative noun phrase is represented by a clitic in the auxiliary, as is the case in (63):

- (63) *ŋatjulu-lu ka-ŋa-ŋku kaŋi paka-ŋi njuntu-ku*
I-ergative present-1-2 boomerang chop-nonpast you-dative
'I am cutting a boomerang for you'

Here, only the dative noun phrase /njuntu-ku/ 'for you' is represented by a clitic. However, if a benefactive noun phrase is inserted into (62), there will be two datives in the same sentence. In such cases, both are represented by clitics in the auxiliary, as shown in (64):

- (64) *ŋatjulu-lu ka-ŋa-ŋku-la kaŋi-ki wari-ŋi njuntu-ku*
I-ergative present-1-2-3 boomerang-dative seek-nonpast you-dative
'I am looking for a boomerang for you'

These three-membered clitic sequences are also subject to a constraint: they must be of the form subject-dative-*la*. Thus, one of the dative noun phrases in such a sentence must be of a form whose corresponding dative clitic is /-la/, that is, it must be third singular. It appears again, however, that an inanimate nonsingular third person can be treated as if it were singular with respect to agreement in such cases. Thus, consider (65):

- (65) *ŋatjulu-lu ka-ŋa-ŋku-la kaŋi-tjara-ku wari-ŋi njuntu-ku*
'I am looking for two boomerangs for you'

Here, a third person inanimate dative noun phrase in the dual, /kaŋi-tjara-ku/ 'boomerang-dual-dative', normally requiring the clitic /-palaŋu/, is allowed to take the clitic /-la/ instead. But strings of the form shown in (66) are unacceptable:

- (66) (a) **ŋarka-ŋku lpa-zero-tju-ŋku njuntu-ku waru-nu ŋatju-ku*
man-ergative past-3-1-2 you-dative seek-past me-dative
'The man was looking for you for me'
(b) **ŋarka-ŋku lpa-zero-tju-la njuntu-ku waru-nu ŋatju-ku*
man-ergative past-3-1-*la* you-dative seek-past me-dative

The sentence (66a) is ill-formed because it violates the constraint on clitic sequences (a sequence of two nonsubject clitics is allowed only when the second is

/-la/). Sentence (66b) is ill-formed because the clitic /-la/ cannot be construed with the second person dative noun phrase /njuntu-ku/.

There is a morphological detail concerning clitic sequences of the form subject-dative-*la* which should be mentioned at this point. In sentences of the type represented by (64), if both dative noun phrases are third person singular, both must be represented of course in the auxiliary. However, the sequence /-la-la/ is not permitted. Instead, the second of these dative clitics is replaced by the morph /-tjinta/, as shown in (67):

- (67) *natjulu-lu ka-na-la-tjinta kali-ki wari-ni narka-ku*
 I-ergative present-1-3-3 boomerang-dative seek-nonpast man-dative
 'I am looking for a boomerang for the man'
 (*... ka-na-la-la ...)

Another circumstance in which the clitic sequence subject-dative-*la* arises is the following. An object of a transitive verb is put into the dative to indicate that the action denoted by the verb is not fully carried out, in the sense that it does not have the intended effect on the entity denoted by the object. That is to say, putting the object into the dative cancels the otherwise affective nature of the transitive verb. However, not only does the object go into the dative, but the clitic /-la/ is inserted into the auxiliary as well, in addition to the dative clitic which emanates from the object. This /-la/ does not relate to any noun phrase in the sentence but is merely a part of the morphology associated with the meaning achieved by the change in object case marking.

The sentences in (68) illustrate unaltered (absolutive) and altered (dative) object case markings together with the corresponding difference in meaning:

- (68) (a) *njuntulu-lu phi-nga-tju pantu-nu natju*
 you-ergative phi-2-1 spear-past me
 'You speared me'
 (b) *njuntulu-lu phi-nga-tju-la pantu-nu natju-ku*
 you-ergative phi-2-1-la spear-past me-dative
 'You speared at me; you tried to spear me'

If the object is third person singular, this operation gives rise to a sequence of the form */-la-la/, which, according to rule (as in the case of (67)), is converted to /-la-tjinta/, as in (69):

- (69) *natjulu-lu phi-na-la-tjinta wawiri-ki luwa-nu*
 I-ergative phi-1-3-tjinta kangaroo-dative shoot-past
 'I shot at the kangaroo; I tried to shoot the kangaroo'
 (*... phi-na-la-la ...)

Dative clitics, apart from the third singular, which is special in several respects, are identical in their Aux-internal behavior to the object clitics already discussed. That is, they are subject to the same rules: metathesis (of the number markers /-pala/ and /-lu/) and the systematic replacement of dual clitics by corresponding plurals apply identically in both cases. However, there is one respect in which one class of dative clitics, namely, those associated with benefactives, differs from others. In reality, though, this is a difference in syntax rather than a difference in the behavior of the clitics themselves. First and second person subjects are incompatible with first person inclusive objects (whether absolutive or dative). Hence, the corresponding clitic sequences, /-na-naliŋki/ '1-12', /-nra-nalpa/ '2-122', and the like, do not occur. But such sequences of clitics can in fact occur provided the second clitic is a dative

emanating from a benefactive. Thus, while one does not normally say the sentences in (70), one can say those in (71):

- (70) (a) **natjulu-lu ka-na-naliŋki nja-nji nali*
 I-ergative present-1-12 see-nonpast us
 'I see us two inclusive'
 (b) **njuntu ka-nra-naliŋki wan-ka-mi nali-ki*
 you present-1-12 speak-nonpast us-dative
 'You are speaking to us (dual inclusive)'
 (71) (a) *natjulu-lu kapi-na-naliŋki wa-lu ma-ni nali-ki*
 I-ergative future-1-12 firewood get-nonpast us-dative
 'I will get us (dual inclusive) some firewood'
 (b) *njuntulu-lu phi-nga-naliŋki wa-lu ma-ni nali-ki*
 you-ergative phi-2-12 firewood get-nonpast us-dative
 'You should/will get firewood for us (dual inclusive)'

A detailed account of the syntax of Walbiri agreement would go considerably beyond the central purpose of this paper, which is concerned primarily with the question of the relationship between noun phrases and corresponding pronominal clitics. For the present purposes, the essential syntactic facts are given. Clitics appear in the auxiliary in agreement with the subject, with the direct object (provided no dative noun phrase also appears), with dative complements, and with the benefactive (also dative in case). Noun phrases in other functions (such as locative and directional) are not represented by clitics in the auxiliary. In addition, there is a clitic /-la/, identical to the third singular dative, which appears under circumstances not directly related to agreement (as in (68b)). The possible basic clitic sequences are listed in (72):

- (72) subject-object
 subject-dative
 subject-dative-*la*

These basic sequences are modified by (a) a rule of clitic metathesis which shifts a number marker /-pala/ or /-lu/ to the right of a following /-tju/ or /-ŋku/; (b) rules which replace a basically dual clitic by its plural counterpart under certain circumstances; and (c) a late morphological rule which replaces a basic sequence */-la-la/ by /-la-tjinta/.

To complete the basic factual account of Walbiri clitic sequences, it is necessary to accommodate the reflexive and the reciprocal. In a reflexive sentence the object is not represented by a noun phrase, but the auxiliary contains a reflexive clitic following the subject clitic, as in (73):

- (73) (a) *njuntulu-lu ka-nra-njanu mapa-ni*
 you-ergative present-2-reflexive rub-nonpast
 'You are rubbing yourself (with red ochre, or the like)'
 (b) *narka-tjara-lu ka-pala-njanu patji-ni*
 man-dual-ergative present-33-reflexive cut-nonpast
 'The two men are cutting themselves'

With two exceptions, the reflexive clitic is universally /-njanu/. The first of these exceptions is the first person singular, where the reflexive clitic is identical to the nonreflexive object clitic, as in (74):

- (74) *natjulu-lu phi-na-tju patju-nu*
 I-ergative phi-1-1 cut-past
 'I cut myself'

The second of the two exceptions is the second person singular in the imperative, where the reflexive clitic is likewise identical to the nonreflexive. In (73a) the second person singular reflexive is /-njanu/, but in the corresponding imperative it is /-ŋku/, that is, it is identical to the ordinary second singular object clitic. I illustrate in (75):

- (75) *mapa-ka φ-ŋku*
 rub-imperative imperative-2
 'Rub yourself (with ochre, or the like)!'

Dative and benefactive reflexives are identical in form to the objective ones just illustrated. In all cases the reflexive clitic immediately follows the subject. As in the case of nonreflexive dative clitics, dative reflexives may be followed by /-la/ under the appropriate circumstances, as in (76):

- (76) (a) *ŋatjulu-lu ka-ŋa-tju-la kali-ki wari-ŋi*
 I-ergative present-1-1-3 boomerang-dative seek-nonpast
 'I am looking for a boomerang for myself'
 (b) *ŋarka-tjara-lu ka-pala-njanu-la kuḷaḍa-ku wari-ŋi*
 man-dual-ergative present-33-reflexive-3 spear-dative seek-nonpast
 'The two men are looking for a spear for themselves'

But dative reflexives may not be followed by other dative or objective clitics. Thus they conform in their occurrence to the sequences tabulated in (72).

The interpretation of a sentence like (73a) or (74) is that the subject and the object are coreferential; similarly, the interpretation of (76a) is that the subject and the beneficiary are coreferential. These interpretations are, of course, consistent with a theory which holds that the deep structures of such sentences contain actual object or benefactive noun phrases which are identical to and coreferential with the subject and which, although ultimately deleted from the surface structure, are responsible for the reflexive agreement. The derivation from such a deep structure might involve marking the coreferential object or benefactive noun phrase as reflexive and allowing the reflexive feature to be copied, along with features of person, number, and case, into the auxiliary by the agreement rule. Subsequently, in such a theory, the reflexive noun phrase itself would be deleted.

This seems, in fact, to be a reasonable account of Walbiri reflexives. However, I am hesitant to commit myself to any analysis of the reflexive until a reasonable account of the reciprocal is established. The fact is, the reflexive and reciprocal are identical in Walbiri save for the fact that the reciprocal interpretation is possible only where the subject is nonsingular. Thus, while only the reflexive interpretation is possible for (73a), both reflexive and reciprocal interpretations are possible for (73b). I see no way at the moment to develop a unified syntactic treatment of the reflexive and the reciprocal; thus, I will limit my remarks to the foregoing description of their gross morphological behavior.

Whatever the correct syntactic analysis of the reflexive ultimately turns out to be, it is clear that it will be necessary to refer to the categories of person and number in order to accommodate the exceptions to the otherwise general rule that the reflexive is represented by /-njanu/ within the auxiliary, that is, in order to account for the fact that the reflexive is represented by the ordinary object (or dative) clitics in the first person singular and in the second singular imperative.

8. SOME CONCLUDING OBSERVATIONS

The two alternatives which we have been considering as possible mechanisms for effecting person agreement in Walbiri are, in a sense, extremes. The constituent-copying conception of agreement holds that pronominal clitics and determiners are merely alternants of one another. The feature-copying conception, on the other hand, holds that there is no direct morphological identification to be made between pronominal clitics and determiners (or pronouns); instead, the latter determine the person and number of noun phrases, and it is the abstract features identified with these categories which are transferred from the appropriate noun phrases into the auxiliary, to be spelled out later as sequences of morphemes. Any morphological similarity between determiners and pronominal clitics is purely accidental under the feature-copying alternative.

I think there can be little doubt but that the constituent-copying alternative, in the literal sense, is impossible for Walbiri. It seems totally clear that the abstract features of person and number must be invoked in an adequate account of Walbiri agreement; furthermore, morphophonological similarities between clitics and determiners appear, as a matter of fact, to be highly unsystematic and of little if any synchronic significance, whatever their historical validity might be.

It is reasonable to question, however, whether the extreme represented by the feature-copying alternative is, in general, the only viable conception of person agreement. Suppose, for example, that pronominal clitics were identical in phonological shape to the independent pronouns (that is, determiners) of corresponding feature composition. That is to say, suppose that the auxiliary in such hypothetical structures as (27) were in fact the ultimate surface form. And suppose further that the other facts of Walbiri were as they actually are: the clitic construed with a conjoined noun phrase is the pronoun which embodies the categories of person and number of the noun phrase as a whole (for example, clitic /-ŋali/, phonologically identical to the independent pronoun /ŋali/ '12', construed with the conjoined expression /njuntu manu ŋatju/ '2 and 1', and similarly for other cases); dual clitics are replaced by plurals under certain circumstances. In short, suppose that, as is actually the case in Walbiri, the abstract features of person and number play a role in determining the correct surface clitic sequences. Given these suppositions, then clearly it would be a mistake to choose a treatment of agreement which failed to reflect the morphophonological identification of clitics with independent pronouns. While it would still be necessary to allow reference to the features of person and number, failure to express the identity of phonological actualization between clitic and independent pronominal feature complexes would amount to a failure to express a linguistic fact of the most obvious kind, that is, a fact of observation at the surface representation of linguistic forms.

To be sure, Walbiri does not conform to the hypothetical picture just drawn. Nonetheless, one could conceive of a version of Walbiri agreement which did in fact have, as an intermediate stage, the hypothetical case. The difference between Walbiri and the latter would then lie precisely in the difference of surface phonological representation between clitic and noun phrase occurrences of the relevant feature assemblages. Along these lines, one could construct a theory of Walbiri agreement which was, in effect, a compromise between the extremes explored in the body of the preceding discussion. The compromise would be a constituent-copying alternative which allowed reference to abstract features at all of the critical points in the derivation of correct clitic sequences.

In thinking about this question, it is instructive to imagine what the historical

antecedent of Walbiri agreement might have been like and, if possible, to examine a language which represents synchronically some antecedent stage in the imagined evolution. I think it is reasonable to propose that the source of pronominal clitics in Walbiri is in fact independent pronouns which, at some stage in the prehistory of the language, became unstressed and were attracted into clitic position (that is, second position) in accordance with a principle of clitic placement which is extremely widespread among languages of the world.²³ The process of destressing and cliticizing pronouns eventually became an obligatory rule and, subsequently, independent pronouns were re-created from other sources available to the language, such as oblique forms of pronouns like those found in possessives or in other functions not normally subject to cliticization.²⁴ Such a sequence of events seems quite suggestive and is, moreover, entirely compatible with the synchronic state of affairs in which pronominal clitics no longer necessarily resemble, in phonological constituency, the determiners which they most closely approximate in grammatical feature composition.

Whether or not such an imagined historical development represents the actual evolution in the Walbiri case, it is a fact that there exists at least one language in Australia—Warramunga, a neighbor of Walbiri to the east—which represents synchronically the initial phase.²⁵ In Warramunga, the independent pronouns become unstressed and cliticize, that is, become enclitic to the first nonpronominal constituent of the sentence. Warramunga, like Walbiri, allows permutation of the constituents of a sentence: whatever the resulting surface order of nonpronominal constituents, the pronouns appear in second position. Consider, for example, the variants in (77), in which the subject pronoun /aŋi/ 'I' appears:

- (77) (a) *kunapa-aŋi waŋari-tji wuɾu-nju*
dog-I stone-instrumental hit (with missile)-past
(b) *waŋari-tji-aŋi kunapa wuɾu-nju*
stone-instrumental-I dog hit-past
(c) *wuɾu-nju-aŋi kunapa waŋari-tji*
hit-past-I dog stone-instrumental
:
'I hit the dog with a stone'

²³ This principle is operative in a large number of Australian languages, but it is also widespread elsewhere. For example, it is operative in many of the Uto-Aztec languages of North America, in at least one of the Algonquian languages (namely, Abnaki—see Laurent (1884, p. 119)), and to a limited extent in the Athabaskan language Navajo; its operation in Serbo-Croatian is described in Browne (1966). In Papago, a Uto-Aztec language of the American Southwest, the surface positioning of the auxiliary appears to be identical to that of Walbiri (see Hale (1969a, note 3)). The principle is, in fact, known as Wackernagel's law and its operation in Indo-European is the subject of a long paper by Wackernagel (1892).

²⁴ In Waŋman, of Western Australia, the creation of new independent pronouns has been especially interesting. All are based upon the stem /para/, of unknown etymology but certainly not a pronoun historically (O'Grady, Voegelin, and Voegelin (1966, p. 136)). Waŋman is very closely related to languages whose modern independent pronouns are built upon forms which were pronominal historically. It is, in fact, reasonably closely related to Walbiri.

²⁵ I am indebted to Sandy Nandy and to George Bruce for their help in my brief study of Warramunga. I have also benefited from Capell's sketch (1953). I use here a common spelling of the tribal name—Warramunga—but the speakers whom I consulted pronounced it [waɾumunju]. The inventory of consonants and vowels for Warramunga is the same as that for Walbiri, except that (a) it lacks the retroflexed flap /d/, and (b) it has an opposition between tense and lax stops which, although little understood, clearly plays a role in the phonology: superficially, at least, there are minimal pairs for tensity, such as /paɾa/ 'leave, imperative', /paɾ:a/ 'heel'. Furthermore, so far as I know, Warramunga lacks the length distinction in vowels which is found marginally in Walbiri (a recent development there—see Hale (to appear, note 54 and related text)).

If both the subject and the object are represented by pronouns, both cliticize, and, as in the case of Walbiri pronominal clitics, they appear in the order subject-object. In (78), the pronouns are subject /aŋi/ 'I' and object /aŋku/ 'you (sg)':

- (78) (a) *waŋari-tji-aŋi-aŋku wuɾu-nju*
stone-instrumental-I-you hit-past
(b) *wuɾu-nju-aŋi-aŋku waŋari-tji*
hit-past-I-you stone-instrumental
'I hit you with a stone'

The pronominals are not the only elements which appear in clitic position. Among other clitics is a marker /a/ which, together with an inflection on the verb, marks future tense. This follows the cliticized pronouns, as illustrated in (79) and (80):²⁶

- (79) (a) *yuwala-tja-aŋi-aŋku-a paki-l*
spear-instrumental-I-you-future spear-future
(b) *paki-l-aŋi-aŋku-a yuwala-tja*
spear-future-I-you-future spear-instrumental
'I will spear you with a spear'
(80) (a) *kunapa-aŋi-a waŋari-tji wuɾu-φ*
dog-I-future stone-instrumental hit-future
(b) *waŋari-tji-aŋi-a wuɾu-φ kunapa*
stone-instrumental-I-future hit-future dog
:
'I will hit the dog with a stone'

Warramunga pronouns, although they normally appear unstressed and cliticized, are in fact independent pronouns in the sense that they can appear as isolated, fully stressed words—as answers to questions, for instance. They can also appear fully stressed as postposed tags to sentences, in which position they serve to reemphasize or to clarify the identification of, say, the subject which is represented by a cliticized pronoun within the sentence itself. Furthermore, subject pronouns may (under conditions, perhaps of style, which I do not adequately understand) appear fully stressed in sentence-initial position. All of this is totally unlike the behavior of Walbiri pronominal clitics.

It is not the case in Warramunga, as it is in Walbiri, that both clitic and independent varieties of a given pronoun can co-occur within the same sentence, except for the rather marginal case in which a reemphasizing tag pronoun appears (separated, incidentally, from the main body of the sentence by a considerable pause). It would seem, therefore, that Warramunga does not have agreement in the Walbiri sense. Rather, I think the correct way to view the Warramunga case is along the lines already suggested, that is, to assume that pronouns are actually moved, rather than copied, into clitic position.

One might expect that if Warramunga cliticization involves the actual movement of pronouns, it would never be necessary to make reference to the categories of person

²⁶ In Warramunga, morpheme-final vowels are deleted before a following morpheme-initial vowel. This rule is applied without fail at the juncture between a morpheme and following suffix or pronominal clitic, although between words the rule is less strictly observed. Thus, for example, the sentences of (79) are as follows, after vowel deletion:

- (a) *yuwalatjaŋaŋka pakil*
(b) *pakilanŋaŋka yuwalatja*

and number in deriving correct clitic sequences. This is not the case, however. Once the pronouns are in clitic position, not only is it necessary to apply a variety of phonological rules to derive the ultimate surface forms (including the completely general deletion of morpheme-final vowels in the environment ____ + V and, in addition, a rather diverse array of highly idiosyncratic morphophonological readjustments), but also, as is the case in Eastern Walbiri, there must be neutralization of the distinction between dual and plural number in clitic sequences of nonsingular subject followed by nonsingular object. To effect this neutralization, clearly, reference must be made to the category of number. In this respect the Warramunga system closely resembles the Walbiri one and affords a suggestive model for a possible historical antecedent to the latter.

The similarity between the two systems is also evident in their treatment of conjoined noun phrases. In Warramunga, as in Walbiri, where the subject or object is a conjoined expression, the corresponding pronominal element appearing in clitic position must embody the features of number and person appropriate to the expression as a whole. Thus, the conjoined expression /aɲi c aɲi/ 'you and I' (in which *c* represents an intonational feature characteristic of Warramunga noun phrase conjoining, not otherwise marked morphologically), which can appear as such only as an isolated expression or as a tag, is regularly replaced by the corresponding pronoun /ayil/ '12'. The latter, of course, becomes unstressed and moves to clitic position, as shown in (81):

- (81) *kuyu-ayil walpu-nju, aɲi c aɲi*
meat-12 kill-past, you and I
'We killed meat, that is, you and I did'

Where a conjoined expression includes both a pronoun and a noun, only the former is subject to cliticization, and it must cliticize unless the expression is isolated or is a tag. However, it is not the case that the pronoun simply cliticizes out of the conjoined noun phrase; rather, the pronoun is replaced by one which embodies the number of the noun phrase as a whole, and it is this composite pronoun which cliticizes. Thus, in the conjoined expression /kiritji c aɲi/ 'the woman and I', which can appear as such in isolation or in a tag, the pronoun /aɲi/ 'I' is replaced by the first person exclusive pronoun /atjil/ '11'. This latter cliticizes, but a vestige of the original duality is left in the noun phrase in the form of the dual suffix /-kutjur/ attached to the noun /kiritji/ 'woman', as in (82):

- (82) *kiritji-kutjur-atjil yɪŋal kura-yina*
woman-dual-11 frightened run-past (narrative)
'The woman and I ran away in fear'

Where only nouns are present in, say, a conjoined subject noun phrase, a pronoun embodying the number of the whole appears in clitic position. Thus, as in (83), /awul/ '33' appears in association with a noun phrase like /kambatju c kaɲanti/ '(my) father and mother':

- (83) *kambatju c kaɲanti-awul apirapa-n*
father and mother-33 come-present
'(My) father and mother are coming'

Sentences like (83) raise an interesting question. The subject noun phrase /kambatju c kaɲanti/ consists of two singular nouns. Therefore, it cannot be said to have contained the pronoun /awul/ as such in its deep structure representation. But then where does /awul/ in (83) come from if, as seems to be the case, the Warramunga system of person marking involves the actual movement of pronouns into

clitic position from positions otherwise occupied by (subject or object) noun phrases? The possibility arises that Warramunga might actually represent a system which to some degree approximates the compromise conception of agreement suggested very briefly for Walbiri earlier. We have reason to suspect, for example, that there must exist in Warramunga a process which creates pronouns on the basis of the person and number feature composition of noun phrases. This is the process which creates the pronoun /atjil/ (or at least the abstract feature assemblage which underlies it) to replace /aɲi/ in conjoined expressions of the type represented by /kiritji c aɲi/ 'the woman and I'. If such a process actually exists for cases like this one, then it does not seem unreasonable to extend its application to noun phrases like (kambatju c kaɲanti/. In general, what one might propose for Warramunga is something like the following: if a subject or object noun phrase is not a pronoun and therefore cannot itself cliticize, then a strictly pronominal copy of it is produced; subsequently, all subject and object pronouns, whether they are copies or originals, undergo the process of cliticization.²⁷ This seems as reasonable a proposal as any for Warramunga. However, I am not at all sure what kinds of evidence could be brought to bear either to support or to contradict it. Thus, I am reluctant to attempt a formalization of any proposal vaguely suggested here.

Let us assume for the sake of the discussion, however, that the proposal just mentioned is correct for Warramunga. What is central here is the claim that pronouns are actually moved into clitic position. I will refer to Warramunga and other languages like it as "clitic-placement languages," at least insofar as the system of person marking is concerned. The question I would like to address myself to now is whether Walbiri is also a clitic-placement language in this respect. Or, to put the question another way, what is the difference between the Walbiri and Warramunga systems of person marking?

Notice that the proposal suggested as most reasonable for Walbiri is somewhat different from that suggested for Warramunga. For Walbiri, I have proposed what is essentially an agreement rule, that is, a rule which effects an agreement, by feature copying, between (subject and object) noun phrases and the auxiliary. Now it is certainly possible to extend the Warramunga proposal to Walbiri. One might suggest, for example, that in Walbiri there is produced a strictly pronominal copy of each subject and object noun phrase, whether pronominal or nominal; subsequently, the copies (but not pronouns originally in the base structure) undergo the process of cliticization. Under this proposal, Walbiri would differ from Warramunga in the following ways: (a) the process of creating pronominal copies would be extended to all subject and object noun phrases; (b) only the pronominal copies would cliticize; and (c) a special set of rules would be needed to provide the phonological actualization of pronominal clitics since there is no systematic correspondence in phonological shape between clitics and independent pronouns. On the other hand, Warramunga and Walbiri would be in agreement in that the surface positioning of person markers is by a movement rule of clitic placement.

Although I certainly cannot take a strong position in this matter, I feel that it is at least worth considering the possibility that the Walbiri system of person marking is synchronically quite different from that of Warramunga. At some future time, it might be possible to argue more strongly than I am now able to that the correct way to view the Walbiri system is in terms of the feature-copying alternative outlined

²⁷ Some details are glossed over here. Third person singular subjects and direct objects are not represented by clitic pronouns, although third person-dative is represented by the clitic /aku/. There is, however, some ability to cliticize evident on the part of the third person definite determiner /ɲala/ 'the, this', appearing as /ala/ in clitic position.

earlier, and, further, that there is a significant typological distinction to be made between clitic-placement systems of person marking, like that of Warramunga, and what we might term "agreement" systems of person marking, represented here by Walbiri. To be sure, one might object to this conception of Walbiri person marking on the grounds that the Walbiri person markers do in fact appear in clitic position in surface structures. But the answer to this is that it is really the auxiliary which appears in clitic position: the person markers themselves are attached to the auxiliary base, as is to be expected if it is actually the case that the Walbiri system is one in which the auxiliary can be said to agree in person and number with subject and object noun phrases. Moreover, it is most reasonable to assume that agreement takes place prior to permutations in word order and, therefore, prior to the point at which the auxiliary is itself inserted into clitic position.

If it is correct that Warramunga and Walbiri are typologically different in this way, then the obvious similarities between the two systems—including similarities of syntactic and morphological detail, as well as similarities due to common retention of morphs (such as Walbiri /-tju/ '1 object', /-ŋku/ '2 object' beside Warramunga /atju/ '1 object', /aŋku/ '2 object')—are to be explained in historical terms. Both languages went through a stage in which cliticization of pronouns was a synchronic process in their grammars. For Warramunga, that happens still to be the case. The development which sharply distinguished Walbiri from Warramunga was the creation of a new set of independent pronouns, giving rise to the current state of affairs in which both independent and clitic pronouns, not necessarily at all alike in phonological shape, are permitted to co-occur in the same sentence, a system in which pronominal clitics appear in *agreement* with independent (albeit optionally deletable) pronouns.

REFERENCES

- Browne, W. (1966), "On the problem of enclitic placement in Serbo-Croatian," unpublished paper, M.I.T.
- Capell, A. (1953), "Notes on the Warramunga Language, Central Australia," *Oceania*, 23, 296-311.
- Capell, A. (1962), *Some Linguistic Types in Australia*, Oceanic Linguistic Monographs, 7, Sydney.
- Hale, K. (1969a), "Papago /cim/," *IJAL*, 35, 203-212.
- Hale, K. (1969b), "Walbiri conjugations," unpublished paper, M.I.T.
- Hale, K. (1970), "The Passive and Ergative in Language Change: the Australian Case," *Pacific Linguistic Studies in Honor of Arthur Capell*, Pacific Linguistics, Series C, no. 13.
- Hale, K. (to appear), "Deep-Surface Canonical Disparities in Relation to Analysis and Change: an Australian Example," in T. Sebeok, ed., *Current Trends in Linguistics*, vol. 11.
- Laurent, J. (1884), *New Familiar Abenakis and English Dialogues*, Quebec.
- O'Grady, G., C. F. Voegelin, and F. M. Voegelin (1966), "Languages of the world: Indo-Pacific fascicle six," *Anthropological Linguistics*, 8, 1-197.
- Perlmutter, D. (1971), *Deep and Surface Structure Constraints in Syntax*, New York: Holt, Rinehart and Winston.
- Reece, L. (1970), *Grammar of the Walbiri Language of Central Australia*, Oceania Linguistic Monographs, 13, Sydney.
- Wackernagel, J. (1892), "Über ein Gesetz der indogermanischen Wortstellung," *IF*, 1, 333-436.

THE BASE RULES FOR PREPOSITIONAL PHRASES

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People seem never to have taken prepositions seriously. One proposal in print (Fillmore (1968)) treats prepositions as case markers, having equal status with the case inflections of Latin or German. Another proposal (Postal (1971)) treats them as realizations of features on noun phrases. Still another (Becker and Arms (1969)) tries to reduce prepositions to a subclass of the category "verb." What all these proposals have in common is that they deny that the category "preposition" has any real intrinsic syntactic interest other than as an annoying little surface peculiarity of English.

The neglect of prepositions arises from the assumption that prepositional phrases invariably take the form P-NP: if this were the case, prepositions would indeed be dull. However, I will show here that such an analysis is not adequate and that prepositional phrases are by no means as trivial as generally supposed.

1. PP → P

Klima (1965) realized that prepositions are more than markers on NPs. He showed that many "adverbs" such as *home*, *downstairs*, and *afterward* can advantageously be identified as "intransitive prepositions," that is, prepositions that do not take an object. Emonds (1970) argued that the traditional "particles" of verb-particle combinations such as *look up*, *give out*, and *show off* are also best analyzed as "intransitive prepositions."

The arguments for the existence of intransitive prepositions are straightforward. First, we note in (1) the close phonological relation (often identity) obtaining between many ordinary prepositions and the words in question:

- (1) (a) Chico ran $\left\{ \begin{array}{l} \text{into the opera house} \\ \text{in} \end{array} \right.$

(Continued)