AUSTRALIAN CASE SYSTEMS
SOME TYPOLOGICAL AND HISTORICAL OBSERVATIONS

Barry J. Blake

PREFATORY NOTE

The phonemicisation used in quoting examples in this paper has been regularised to the scheme given below. However, I have retained the voiceless symbols (p, t, etc.) or voiced symbols (b, d, etc.) as in the sources. The difference between voiceless and voiced stops is not normally significant in Australian languages.

Labials: p, m; lamino-dentals: t̪, n̪, l̪; apico-alveolars: t, n, l, r (flap); apico-postalveolars (retroflexes): ṭ, ṇ, ḷ, ṛ (glide); lamino-palatals: tʸ, nʸ, lʸ, y; velars: k, ŋ, w; vowels: i, a, u. Some languages have a 'trilled r': rr; some have a glottal stop: ?.

In general language names have been spelled in accordance with A.I.A.S. conventions.

Examples quoted in the text are numbered consecutively and numbers quoted in the text refer to these examples. Paragraphs are referred to by compound numbers, e.g. 2.1.
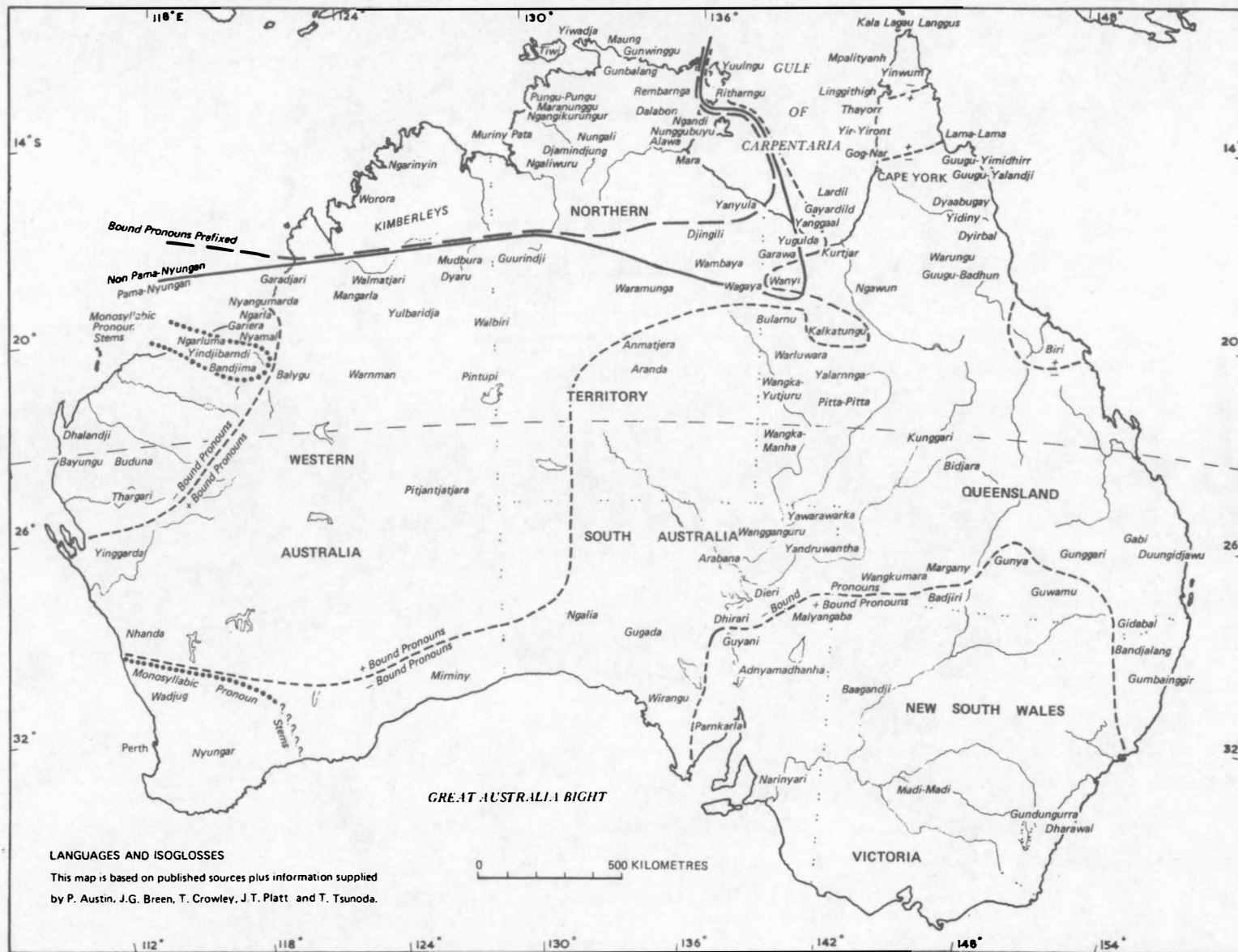
The expansion of the abbreviations for Australian states (e.g. Q. for Queensland) is available on the map.

ACKNOWLEDGEMENTS

Notes on the Map

The map does not include Tasmania.
It is uncertain whether the extinct
languages of Tasmania were related
to those of the mainland. Recent
work by the author has tentatively
established a tenuous lexical link
with the western Kulin languages of
western Victoria and hence indirectly
with the mainland in general.

LANGUAGES AND ISOGLOSSES

110°E 124 130° 136° 148°

Yiwadja
Tiwi Maung
Gunwinggu
Gunbalang
Pungu-Pungu
Maranunggu Rembarnga
Ngangikurungur Dalabon Ngandi
Muriny Pata Nunggubuyu
Djamindjung Nungali Alawa
Ngaliwuru Mara
Ngarinyin

Worora
KIMBERLEYS NORTHERN Yanyula

Kala Lagau Langgus
Mpalityanh
Yinwun
Yuulngu GULF
Ritharngu Linggithigh
OF Thayorr
Yir-Yiront CARPENTARIA
Gog-Nar Lama-Lama
Guugu-Yimidhirr
CAPE YORK Guugu-Yalandji
Dyaabugay
Yidiny
Yingulda Dyirbal
Garawa Kurtjar Warungu
Guugu-Badhun

Bound Pronouns Prefixed

Non Pama-Nyungan
Pama-Nyungan Garadjari Mudbura Guurindji
Monosyllabic Nyangumarda Walmatjari Dyaru
Pronoun Ngarla Mangarla Wambaya
Stems Gariera Wagaya Wanyi
Ngarluma Nyamal Yulbaridja Waramunga Ngawun
Yindjibarndi Walbiri Bularnu Kalkatungu Biri
Bandjima Balygu Warnman Pintupi Anmatjera Warluwara
Dhalandji Aranda Wangka Yalarnnga
Bayungu Buduna -Yutjuru Pitta-Pitta
Bound Pronouns Bound Pronouns
+ Bound Pronouns Wangka
Thargari WESTERN -Manha
Kunggari
TERRITORY Bidjara
Yinggarda AUSTRALIA Pitjantjatjara Gabi
SOUTH AUSTRALIA Yawarawarka Margany Gunya Gunggari Duungidjawu
Wangganguru Guwamu
Arabana Yandruwantha Wangkumara Bound
Nhanda Ngalia Gugada Dieri + Bound Pronouns Badjiri Pronouns Gidabal
Dhirari Malyangaba Bandjalang
Monosyllabic Guyani Gumbainggir
Pronoun Adnyamadhanha Baagandji NEW SOUTH WALES
Wadjug Stems Mirniny Wirangu
+ Bound Pronouns
- Bound Pronouns Parnkarla
Perth Nyungar Narinyari Madi-Madi
Gundungurra
GREAT AUSTRALIA BIGHT Dharawal

VICTORIA

14°S 14

20° 20

26° 26

32° 32

This map is based on published sources plus information supplied
by P. Austin, J.G. Breen, T. Crowley, J.T. Platt and T. Tsunoda.

0   500 KILOMETRES

112° 118° 124° 130° 136° 142° 148° 154°

1. TYPOLOGICAL OUTLINE
1.1. The Major Syntactic Case Relations

In this paper I use the convention of labelling case relations in capitals (DATIVE, INSTRUMENTAL, etc.) and case forms in small letters (dative, instrumental, etc.). The major syntactic case relations are labelled INTRANSITIVE SUBJECT (S_1), AGENT (A), and PATIENT (P). A morphological or syntactic system identifying S_1 and A is described as 'accusative', a system identifying S_1 and P is described as 'ergative'.

In describing the systems for marking the major syntactic cases (S_1, A and P) to be found in Australian languages, it is convenient to distinguish between the Pama-Nyungan family which covers most of the continent and the non-Pama-Nyungan family which occupy the Kimberleys and the Top End (see map). The classification of Australian languages that recognises Pama-Nyungan, etc. was based on cognate densities between lexical items. However, this classification corresponds broadly to what we would find if we classified according to cognate densities between function morphemes or according to morpho-syntactic systems. The classification in its revised form (Wurm 1972) recognises twenty-seven non-Pama-Nyungan families.

Most Pama-Nyungan languages employ an ergative system of case marking for nouns and an accusative system for pronouns. The case marking is in the form of suffixes to the last word in the noun phrase or to all primary constituents of the noun phrase. The ergative is commonly marked by allomorphs such as -lu (after vowels) and -tu (after consonants), the latter assimilating in point of articulation to some or all consonants. In some languages -ŋku is used with vowel stems of fewer than three syllables and -lu with longer stems. The accusative is usually marked by -n̠a or nʸa. Many but by no means all the Pama-Nyungan languages employ cross-referencing bound pronouns. In some languages these are suffixed to the verb, in others to the first word

of the clause and in others again to a special auxiliary particle.
Almost invariably these bound pronouns operate in an accusative
system, the identification of S_1 and A showing up in case marking or
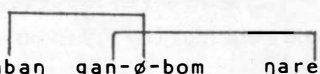via suppletion (as in English *she* v. *her*).

The following examples are from Pitjantjatjara (S.A., W.A.,
Douglas 1964, Glass and Hackett 1970). Pitjantjatjara is a typical
Pama-Nyungan language with nouns operating in an ergative paradigm
and free pronouns operating in an accusative paradigm. There is also
a system of bound pronouns which operate in an accusative paradigm,
these bound pronouns generally being suffixed to the head word of the
clause (but see example 7). The choice between using bound pronouns
or free pronouns or both is free at the information level. A number
of factors determine which pronouns are used; the bound forms
generally represent the unmarked choice but a free pronoun is used if
the referent is to be emphasised. The bound pronouns are potentially
cross-referencing, but we do not have the classic cross-referencing
system of obligatory bound pronouns that characterises most of the
non-Pama-Nyungan languages.

1.   wati pika
     man   sick
     The man is sick   (Douglas: 30)

2.   wati-lu tᵞitᵞi pu-ŋu
     man-erg *child   hit*-past
     The man hit the child   (Douglas: 30)

3.   ŋayulu nᵞaraŋka nᵞina-ŋu
     I   there   sit-past
     I sat there   (Douglas: 32)

4.   ŋayulu papa nᵞa-ŋu
     I   dog see-past
     I saw a dog   (Douglas: 58)

5.   wati-lu ŋayu-nᵞa nᵞa-ŋu
     man-erg *me*-acc   *see*-past
     The man saw me   (Douglas: 59)

6.   nᵞuntulu-n yiṇa   tᵞukumunu
     you-you   *old man big*
     You are a very old man   (G & H: 96)

7.   ŋayu-nᵞa munta-ṇi-n   wana-lku
     me-acc   *query-me-you follow*-fut
     Will you follow me?   (G & H: 48)

8.   ka-nta-ya   piṇi-lu nʸa-ku
     and-you-they many-erg *see*-fut
     And many people will see you   (G & H: 48)

Note the appearance of a hierarchical principle of ordering bound
pronouns in the last two examples. In general the first person bound
pronoun precedes second or third and second precedes third,
irrespective of grammatical function (though -n, the second person
singular form for S_1 and A, is always sequence-final (G & H: 47-48).
Hierarchical principles involving person, and to a lesser extent
number, are fairly common in Australia, and they usually show up in
the relative ordering of bound pronouns.

Typically the non-Pama-Nyungan languages lack case marking for
S_1, A and P and rely instead on cross-referencing pronouns to mark
the major syntactic relations. These cross-referencing systems operate
either on an accusative system as in Tiwi (Bathurst and Melville
Islands, N.T., Osborne 1974) or in a way that involves sufficient
fusion and other sources of irregularity as to make the system
synchronically unanalysable. In most of the non-Pama-Nyungan
languages, the cross-referencing pronouns are prefixed to the verb.
The following example is from Gunwinggu /kunwinʸku/ (N.T., Oates
1964:108), from the story of Godewele the Giant,

9.   ŋabaŋ gan-∅-bom   ŋarewoneŋ ŋaḍug yabog
     cheeky us-he-killed us two   my   sister
     A 'cheeky' one killed both me and my sister

gan is not specifically *us*. ga- can refer to a first person P of any
number acted on by a second person, or a non-singular first person P
acted on by a third person. -n, if the combination is to be analysed,
is an accusative marker, but I am dubious about whether an analysis is
a valid reflection of the synchronic organisation of the prefix rather
than an exercise in internal reconstruction.

Very broadly we could sum up the case marking systems for the major
syntactic relations as follows:

Pama-Nyungan

	S_1	A	P
Nouns	-∅	*-lu[1]	-∅
Pronouns	-∅	-∅	*-Nʸa[2]

(Bound Pronouns   Accusative System)

Non-Pama-Nyungan

	S_1	A	P
Nouns and Pronouns	-∅	-∅	-∅

Bound Pronouns   Accusative System (or a system
   that is difficult to analyse synchronically but
   which can be shown diachronically to have been an
   accusative system)

There are numerous exceptions to the broad summary given above;
some details appear in Blake 1977. Among the Pama-Nyungan languages
accusative marking often intrudes into the basically ergative system
so that in some cases human nouns (e.g., Arabana, S.A., Hercus p.c.)
or all animate nouns (e.g., Thargari, W.A., Klokeid 1969), or in a
few instances all nouns, have accusative as well as ergative marking
(e.g., Wangkumara, Q., Breen 1976a). Also in some Pama-Nyungan
languages ergative marking often intrudes into the basically accusative
pronoun paradigm so that some person/number combinations, especially
first and second singular, have ergative as well as accusative marking.
For example, the Giramay dialect of Dyirbal has a three-way contrast
(S_1, A and P being separately marked) in the first and second
singular (Dixon 1972:50) as has Gabi (Q., Mathew 1910:28, quoted by
Dixon 1972:7). Yandruwantha (S.A.) has a three-way contrast for all
singular pronouns (Breen 1976c:595) and Aranda (N.T.) has a three-way
contrast on first singular only.

Ergative marking is scattered sporadically among the non-Pama-
Nyungan languages with a concentration in the east, e.g., Garawa,
Yanyula, Wagaya, Wambaya, Djingili and Alawa exhibit ergative marking.

It is rare for ergative marking to be found in the bound pronouns.
Yugulda (Q., Keen 1972) has an ergative/nominative/accusative
distinction in the first and second person and some languages in or near
New South Wales, especially near the '± bound pronoun isogloss' (see
map), have some ergative bound forms. Yanyula (N.T., Hale p.c.) is
unusual among non-Pama-Nyungan languages in having some ergative
marking in the bound pronoun system.

1.2. Dative

Almost every Australian language has a suffix that could be
labelled 'dative'. In very many of these languages the form is -ku or
-wu or both; where both variants occur, -ku normally appears with
consonant-final stems, and -wu with vowel-final stems. The range of
function may embrace: (a) the adjunct of an intransitive verb or the

complement of a semi-transitive verb;[3] (b) the 'indirect object' of transitive verbs, (c) possessor, (d) purpose, (e) beneficiary and in some languages the notion of indirect cause or reason (compare English *for* in *She did it for spite*).[4] However, in a large number of languages there is a separate genitive suffix to make the possessor; in a few languages there is a separate form to mark purpose, and in a very small number of languages there is a separate form to mark beneficiary. The indirect object of verbs for *give* is quite often expressed in the same way as P rather than by the dative, but the indirect object of verbs for *show*, *teach* and *tell* is usually in the dative.

In some languages the dative form also expresses *to* or *towards*, but more often there is a separate allative form.

In some languages, mostly the Pama-Nyungan languages of Western Australia, the form that expresses the LOCATIVE case relation competes with the dative form in expressing some of the functions listed above. In Pitjantjatjara, for example, the indirect object of the verbs for *say to*, *teach* and *show* appear in an indirect object/locative/ instrumental form.

The dative plays a part in a number of interesting constructions. In some instances its use is semantically motivated; in others it is syntactically motivated.

A few languages use an intransitive-like construction to express ongoing as opposed to completed activity, and/or attempted as opposed to successfully completed activity and/or indefinite as opposed to definite P. In Kalkatungu[5] (Q), for instance, we find contrasts such as

> 10a. ŋai nʸun-ku ŋanṯamai-kin
> *I you-dat look for-you*
> *I'm looking for you*

> 10b. ŋa-ṯu nʸini ŋanṯamai-ṉa-kin
> *I-erg you find-past-you*
> *I've found you*

Note that in 10a we have the same case marking as in an intransitive sentence, but note also the presence of the bound pronoun (-kin) for P. This cross-referencing bound pronoun could not be used in a genuinely intransitive sentence such as

> 11. ŋai nʸun-ku iŋka
> *I'm coming for you*

10b represents the normal ergative construction. In Kalkatungu pronouns as well as nouns operate in an ergative system. The use of

bound pronouns in independent clauses is optional.

Examples of syntactically motivated constructions involving the dative are given in 3.3 and 3.4. See also 3.6.1 for further discussion of the construction illustrated in 10a.

1.3. Concrete Cases

Australian languages typically exhibit an allative case (*to*), a locative case (*at, near*, etc.) and an ablative case (*from*).

The INSTRUMENTAL case relation is rarely expressed by a separate case form. Most often it is syncretised with the ergative, in a minority of languages with the locative (e.g., Pitjantjatjara, W.A., Warluwara, Q.). Where it is syncretised with the ergative, the INSTRUMENTAL can usually be distinguished from A on syntactic grounds. If the language has a cross-referencing system, A but not the INSTRUMENTAL is cross-referenced.

The sense of indirect cause or reason (*He died from snakebite*) is often expressed by a separate case suffix, the 'causal'. Where there is no separate causal case form, this function is expressed by the ablative, or in some instances by the locative, instrumental or dative.

1.4. Pama-Nyungan Case Systems

The following chart is intended to give an overall impression of the Pama-Nyungan case system. It is not the system of any particular language but a generalised version to which the systems of most Pama-Nyungan languages approximate. The curly brackets indicate common syncretisms.

It is not possible to display the rather more divergent non-Pama-Nyungan systems on a chart. The principal difference is that usually they exhibit no case marking for S_1, A and P and that the other case relations are expressed by a greater variety of forms.

12.   Pama-Nyungan Case Systems

	Nouns	Pronouns
P } S$_1$ }	-∅	-N^{y}a -∅
A	-lu, -ŋku, -tu	
INSTRUMENTAL }	almost always syncretised	
LOCATIVE	-la, -ŋka, -ta	similar to noun locative, but different allomorphs are common
ALLATIVE	various	various
DATIVE	-ku, -wu	-ku, -wu, -ŋa, -ŋu, -nta, -mpa
GENITIVE	various	various
BENEFACTIVE	various	various
ABLATIVE	-ŋuru, -ŋuḷu, -ŋuṇi, etc.	various
CAUSAL	various	various

1.5. Transitivising Mechanisms

Most if not all Australian languages have a productive suffix to convert intransitive verbs to transitive and some have suffixes for converting transitive verbs to ditransitive.

The most commonly encountered mechanism is a suffix for forming transitive verbs from intransitive ones with the P of the transitive verb corresponding to the S$_1$ of the intransitive. In Kalkatungu, for instance, we find,

13a.   piḷa-piḷa iti
       child return
       The child goes back

13b.   maṛapai-ṯu piḷa-piḷa iti-ntii
       woman-erg *child   return*-cause
       The woman sends the child back

Kalkatungu also has the non-productive causative -ma and also a productive causative -puni for nouns and adverbs

14.   maa paa   yarka
       food there far
       The food is over there

15. maa   paa   yarkapunii[6]
     food there far-cause
     He put the food over there

-nti (~ -manti) may also be used to express a LOCATIVE, INSTRUMENTAL
or CAUSAL relation through the verb,

16. ṯuku-yu nu-ntii-n̪a
     dog-erg *lie*-LOC-past
     The dog lay on it

17. ŋa-ṯu kunti wati-ntii
     I-erg *house clean*-INSTR
     I cleaned the house with it

18. maṯu-yu   ḻai-mantii-kin
     mother-erg *hit*-CAUSAL-*you*
     (Your) mother hit you because of it

However, these constructions are used mostly in subordinate clauses
where the noun phrase bearing the case relation is anaphorically
deleted and the case marking transferred to the verb,

19. ucan caa an̪pa-ya   maa-tᵞi ṯuyi-manti-caya
     wood here gather-imp *food*-dat *cook*-INSTR-purposive
     Get some wood to cook the food with

Some languages have devices for expressing the DATIVE case relation
in the same way as P. This enables certain intransitive verbs to be
transitivised and certain transitive verbs to become ditransitive. In
Pitta-Pitta (Q.) for instance, -la is used to transitivise a verb like
ṯiwa (*be jealous of*) so that it can be made reciprocal, reciprocal
formation applying only to transitive verbs,

20. ŋanᵞtᵞa muyutᵞu-ku   ṯiwa-ya
     I   old woman-dat *jealous*-pres
     I'm jealous of the old woman

21. ṯiwa-la-mali-ya   man̪a pula-ka
     jealous-tr-recip-pres *might they two*-unmarked deictic
     They might be jealous of one another

It is also used to incorporate the DATIVE in the case frame of the verb
of a transitive verb as a 'second object' in examples like the following,

22. n̪anpaka kan̪ṯa-ka yan̪ṯurru-n̪a mari-liṉa ŋanᵞaṟi-n̪a
     she   go-past *food*-acc   *get*-infin *me*-dat-acc
     She went to get food for me

23. ṇanpaka kaṇṭa-ka yaṉṯurru-ṉa mari-la-liṇa ṇanᵛa
     she   go-past *food*-acc   *get-tr-infin me*-acc
     She went to get me some food

2. MORPHOLOGICAL DEVELOPMENT
2.1. Nouns
2.1.1. Ergative(-Instrumental)

The ergative is commonly represented by -lu, -ŋku, and -Tu, one or
more of these forms appearing in a given language. Where all three
variants occur, -lu often occurs with vowel-final stems of more than
two syllables, -ŋku with disyllabic vowel stems (very often there are
no monosyllabic stems), and -Tu occurs with consonant stems. T assim-
ilates in point of articulation to the final consonant of the stem.

The relationship between -lu and -Tu is determined by whether we
have a hardening or softening environment. -lu, the weaker variant,
occurs with vowel stems, i.e. with the consonant in the intervocalic
leniting environment; -Tu occurs in the hardening environment of a
consonant. The alternation between -lu and -tu is parallelled in the
dative where -wu occurs following vowels and -ku following consonants,
and also with the phonological filler -wa ~ -pa (see 2.2.2.1) where
-wa occurs with vowels and -pa with consonants.[7]

The relationship between -ŋku and the other variants is explained
by Hale (1976e) as follows.

Some Australian languages have a rule that appends a velar nasal to
vowel stems. In some dialects of Anmatjera, an Arandic language of
Central Australia, the velar nasal is appended to disyllabic noun stems
only. If we posit *-lu as the basic, historically underlying form of
the ergative, we can account for allomorphs such as -tu with alveolar
stems and -ṭu with retroflex stems by rules of hardening and
assimilation. The distribution of possible final consonants in con-
temporary languages suggests that a greater variety of consonants could
once have occurred in word-final position in many languages than is now
the case. In particular, labials and velars tended to be eliminated
from word-final position. This would mean that stems ending in velar
nasals and exhibiting ergatives in -ku, would come to display an
alternation : nominative in zero, ergative in -ŋku. If languages
ancestral to those that have -ŋku with disyllabic vowel stems once had
the Anmatjera-type rule of adding velar consonants to vowel stems,
then they would have had a preponderance of velar nasal stems and,
after elimination of word-final velars, a preponderance of ergatives
in -ŋku. -ŋku could then have been reinterpreted as the allomorph for

disyllabic vowel stems and generalised to all such stems.[8]

In some languages (e.g. Dyaru, W.A., Tsunoda p.c.) -ŋku dissimilates
to -ku if there is a nasal-plus-stop cluster in the stem (see 37,
cf. Blake forthcoming).

Some languages lack the full set of variants given above. In some
languages (e.g. Yalarnnga, Q.) there are no consonant-final stems and
so it is not surprising to find no -tu. However, many languages have
generalised -lu or *-ŋku. In Pitta-Pitta (Q.) -lu is the only variant
of the ergative, but -ŋu from -ŋku marks S_1 and A in the future (see
54, 55). Warungu uses -tu with consonant stems but has generalised
-ŋku with vowel stems to the extent that -lu occurs only with wanʸu
(*who*) and as an optional variant with gayana (*father*) (Tsunoda 1974:84).

The forms given above have been subject to a few phonetic changes
in various languages. -ŋu (<*-ŋku) occurs as the variant for disyllabic
stems in Walmatjari (W.A., Hudson forthcoming) and in Kunggari (Q.,
Breen field notes) as well as in Pitta-Pitta as noted above. -ku
(also <*-ŋku) occurs in Warluwara (Q., Breen 1971) and several languages
of Victoria and New South Wales. -ru (<*-lu) occurs in Wangka-Manha
(Q.) and in Arabana and Wangganguru (both S.A., Hercus p.c.). Vowel
harmony, or more particularly harmony involving the high vowels occurs
in some languages. Arabana and Wangganguru in fact have the harmonising
variant -ri as well as -ru. Loss of final vowels has occurred in
Cape York and in the Arandic languages of Central Australia. Thus in
Aranda the generalised variant -lu appears as -ḷ. In the south-west
corner of the continent metathesis-cum-vowel reduction has produced
ak (<*-ku <*-ŋku) and al (< -lu). Thus in Wadjug -al appears as the
generalised variant of the ergative (O'Grady et al. 1966:132) and in
Nyungan -ak appears as the ergative marker (Douglas 1976).

The ergative marker occurs in all Pama-Nyungan languages except
Lardil, Yanggaal, and Gayardild (all closely related to one another
and located on the Wellesley Islands and adjacent mainland at the
bottom of the Gulf of Carpentaria) and Bandjima, Yindjibarndi,
Ngarluma and Gariera in north-west Western Australia. However,
reflexes of lu occur marking the INSTRUMENTAL in Bandjima and the
INSTRUMENTAL and the A of the passive in Yindjibarndi (O'Grady et al.
1966:84-103).

In some Pama-Nyungan languages use of the ergative is optional.
In these languages it is employed only when it is necessary to dis-
ambiguate a sentence. Baagandji (N.S.W., Hercus p.c.) is extreme in
this respect using its ergative marker, -ru, very sparingly.

Ngarluma and the other languages referred to above as lacking the
ergative marker are in fact accusative languages. The W.A. group
(Ngarluma, etc.) seems to have moved from an ergative system to an
accusative system by generalising 'surface intransitive' type patterns
as illustrated in 10a. It is notable that in this group of languages
P is marked by -ku (and other variants) which represents a syncretism
of P and DATIVE. -ku is very widely distributed in Australia as a
dative marker. The following example is from Ngarluma (Hale 1968:14),

> 24.   maŋkuḷa ṯalku-ṉa   yukuru-ku
>   *child   strike*-past *dog*-acc/dat
>   *The child struck the dog*

If this hypothesis is correct, viz. that these languages have become
accusative by generalising the 'surface intransitive' pattern, then
what would otherwise be a remarkable coincidence, viz. the use of -ku
for P as well as DATIVE in just the accusative languages, is explained.

   In Lardil and the other 'Gulf' languages cited above, we find an
accusative system rather than an ergative system. In Lardil itself
the only language of the group on which data has been published (Hale
1965, 1967a, Klokeid 1976), the accusative is marked by (i)n, perhaps
a reflex of the common Australian accusative marker *Nʸa (see below).
However, in the future the accusative is marked by -kuṟ[9] ~ -wuṟ ~ -ṟ
(see 2.1.4).

   I rather think that Lardil has moved from being ergative to
accusative, having generalised the 'surface intransitive' type con-
struction in the future tense in the same way as Pitta-Pitta (see 54,
55) and then having extended this construction to the non-future.
There are positive signs of Lardil having been ergative, both in the
forms of the first and second person singular pronouns (see discussion
in 2.2.2.1) and in what Klokeid calls the cleft construction in which
P is in the nominative and A in the genitive (Klokeid 1976:557-558),

> 25a. ṯaŋka kupaṟikun ṯi:nin   waŋalkin
>   *man   make   this*-acc *boomerang*-acc
>   *The man made this boomerang*

> 25b. ṯi:n waŋal   ṯaŋamen kupaṟiṯarkun
>   *this boomerang man*-gen *make*
>   *It was this boomerang that the man made*

The verb form in 25b. is not passive, but the genitive is used to mark
the A of the passive.

The use of the 'surface intransitive' construction for the future
tense probably requires some explanation. The construction involves
using the same marking that is used for an intransitive verb and its
adjunct for a two-place verb (see 10a). Thus a verb for *go* will
normally be intransitive and the 'goer' will appear in the nominative.
The adjunct of such a verb normally appears in a case other than the
one used for the P of an unambiguously transitive verb, usually in
what we call the dative. This same construction is usually used for
some two-place verbs that do not involve impingement on the goal of
the verb, e.g. verbs for *look for* or *like*. This often involves an
awkward question of whether these verbs are simply intransitive or a
special kind of transitive. If one is lucky, one finds certain formal
characteristics of transitive verbs associated with them. In
Kalkatungu, for instance, the verb ŋkumai (*to look for*) takes a
distinctively transitive pronoun form in the imperative, but on the
other hand it has to be transitivised like any intransitive before it
can be made reciprocal. Given this mixture of characteristics it
should probably be labelled something like 'semi-transitive'. What is
important however is the use of intransitive-like case marking for
two-place verbs that do not involve impingement on the goal and the use
of this same marking where reference is to uncompleted activity or
future action. In each case there is no impingement or at least no
completed impingement. The intransitive marking is also used for
indefinite goals (*I'm cooking tucker*), where reference is to the
activity indulged in rather than specifically to activity carried out
on the goal. It may be relevant to note that indefinite objects are
probably more common with verbs in the imperfect or future. Think of
characteristic patterns such as *We are going to hunt kangaroo(s)/We
cooked the kangaroo.*

In any event we have a certain kind of 'logic' involved that opposes
impingement and non-impingement so that the optional goal of a one-
place verb, the goal of two-place verbs that do not involve impinge-
ment because of their inherent semantics, and the goal of any
two-place verb in the imperfect or future or an indefinite goal are
treated alike in terms of case marking. The 'logic' is somewhat
fuzzy and indefinite in Kalkatungu. In Yugulda (Q.), to judge from
Keen 1972, it is more definite but the 'logic' is slightly different
in scope in that the use of the negative demands intransitive case
marking. Pitta-Pitta (Q.) exhibits another version of the 'logic'
(see 3.2). It is interesting to note that these examples are all from
north-western Queensland and there is not much evidence of this kind of

thing reported from other areas.[10] Yugulda, interestingly enough,
occupied an area on the southern coast of the Gulf across the water
from the other accusative languages of the area. It is not surprising
then to find that Lardil makes a future versus non-future distinction
in its case marking using -kuṛ etc. to mark the future accusative.

Whether I am on the right track in suggesting that Lardil became
accusative by generalising the surface intransitive pattern to all
future verbs and then generalising the $S_1A:P$ schema to the non-future
remains to be seen. It is certainly a plausible line of development
and it is a line of development for which there is some evidence in
the case of Pitta-Pitta (see 3.2).

It is interesting to note the -ku (assuming Lardil -kuṛ contains
a reflex of *-ku) is involved in the West Australian accusative
languages, in the Wellesley Island accusative languages and in
Pitta-Pitta, which is an accusative neutral mixture.

Among the non-Pama-Nyungan languages the ergative is not strongly
represented. Many of these northern languages lack it entirely (e.g.
Tiwi, Osborne 1974), or use it rather sparingly (e.g. Dalabon, N.T.,
Capell 1962:111). In some languages a marker is used on S_1 as well as
on A, and although such a marker is sometimes reported as an ergative,
probably because it is common with A, its claims to being an ergative
are dubious. In Ngangikurungur (Daly River, N.T.) Hoddinott and Kofod
(1976b:401-405) report the use of niŋgi as an ergative (and instrumental)
form, but they note that it is not always used to mark A and that it is
sometimes used to mark S_1.

Non-Pama-Nyungan languages exhibiting an ergative, whether
obligatory, optional or 'dubious', are scattered around and do not
occur in a contiguous bloc. Since ergative marking is a minority
feature among the world's languages, I interpret this distribution
as reflecting remnants of a once ubiquitous ergative system. The
argument based on the scattered distribution is not conclusive of
course, but it is made more plausible when one considers that all non-
Pama-Nyungan languages employ cross-referencing bound pronouns for the
major syntactic cases and therefore there would be some redundancy
involved in having case marking on noun phrases. I argue below that
these cross-referencing bound pronouns are an innovation (see 2.3).

One weakness in this line of argument might appear to be the
variety of forms marking the ergative in non-Pama-Nyungan languages.
Ngandi (Arnhem Land, Heath forthcoming) appears to be one of the few
with a reflex of *-lu ~ -tu.[11] However, Ngandi has borrowed its form
-tu from the neighbouring Ritharngu language as Heath (forthcoming:

chapter III) clearly demonstrates. Ritharngu is a Pama-Nyungan
language of the Pama-Nyungan enclave in northeast Arnhem Land (see
map). Alawa (N.T., Sharpe 1972) has forms like -ri, tʸi, -yiri,
Rembarnga and Dalabon have yi?, Muriny Pata (Port Keats, N.T., Walsh
1976) has -te and -re. These may or may not turn out to be reflexes
of *-lu ~ *-tu. A number of languages have forms such as nʸi-
Nungali (N.T.), -ni Ngaliwuru and Djamindjung (N.T., Hoddinott and
Kofod 1976a:397-401), -ni Wambaya (N.T.) and -ŋi Djingili (N.T.,
Chadwick 1975, 1976). Ngangikurungur (N.T., Hoddinott and Kofod
1976b:401) has niŋgi as a 'dubious' ergative cum instrumental, and
forms such as ni occur in a number of Daly River languages (Tryon
1974) as an instrumental, and forms such as nʸini, nʸine, nʸinta,
nʸiŋke occur as instrumental forms in the languages of the Kimberleys.
It is likely that these forms are cognate and that they have as their
origin the provenience suggested by Chadwick (1976) for Djingili.
They are likely to reflect a third person pronoun form.[12] There are
a number of possible ways this could have happened. The most likely
seems to be from the use of a third person pronoun following an A noun
phrase and bearing an ergative inflection. In Pitta-Pitta (Q.) for
example, a language in which there are no bound pronouns, noun phrases
in S_1 or A function are normally followed by a third person pronoun.[13]
In Wangkumara (Q., Breen 1976a:336-339), third person pronouns have
become suffixed to nouns as class markers, the non-feminine pronoun
becoming a masculine singular marker, the feminine pronoun becoming
a non-masculine-singular marker. In fact the forms used in Wangkumara,
which are forms common in Queensland, may be cognate with the forms
under discussion.

26.		Masculine	Feminine
	Nom	ɲia[14]	ɲani
	Erg	ɲulu	ɲanrru
	Acc	ɲiɲa	ɲaɲa

When these forms are used as class markers, in most cases the initial
nasal is lost.

This line of argument needs further substantiation of course, but
there is a plausible line of development from characteristically
placing third person pronouns at the end of phrases to suffixing them
and there is some similarity in form between the third person pronouns
of Queensland and the 'nasal ergative' forms under discussion. The
disyllabic forms that occur such as nʸiŋke may reflect the common

ergative marker in the second syllable.

2.1.2. Locative

The locative is usually represented by one or more forms that match
the ergative forms in consonants but have the vowel a instead of u.
Thus in Dyaru (W.A., Tsunoda p.c.) we find the ergative represented
by -ŋku (for disyllabic vowel stems), -lu (for longer vowel stems) and
Tu (for consonant stems), and parallel to this we find the locative
represented by -ŋka (for disyllabic vowel stems), -la (for longer
vowel stems) and Ta for consonant stems.

In some languages there are some discrepancies between the full set
of ergative allomorphs and the locative allomorphs, but in general the
evidence points to a proto-form that matches the ergative in consonants
but has a instead of u, i.e. a proto-form -*la ~ -*ta, with -ŋka being
derived along the same lines as -ŋku (see above).

The phonetic changes that have affected the ergative naturally
affect the locative in the same way. Thus Walmatjari (W.A., Hudson
forthcoming, and Malyangaba (S.A./N.S.W., P. Austin p.c.) have a
locative allomorph -ŋa to match the ergative allomorph -ŋu, and
Warluwara (Q., Breen 1971) has locative -ka matching ergative -ku.

Where phonetic changes such as loss or reduction of final vowels
have occurred, this has had the effect of syncretising the ergative
and locative. As noted in 1.3, the INSTRUMENTAL is normally expressed
by the ergative (or better ergative-instrumental) case form, but in a
few scattered languages it is expressed by the locative (or locative-
instrumental) form. If loss or reduction of final vowels occurs, a
syncretism of A, INSTRUMENTAL and LOCATIVE occurs. This has happened
in Wagaya (N.T., Breen 1976b:340, the Arandic languages of Central
Australia and Kurtjar (Q., Black p.c.) for example.

The generalising of one variant at the expense of others that was
noted above in the discussion of the ergative is not always parallelled
in the locative. Since this is not a phonetic change, the different
development of the two forms is not surprising. In Pintupi (N.T.,
K. and L. Hansen forthcoming), -lu has been generalised as the
ergative marker and -ŋka as the locative. In Pitjantjatjara an
innovation has occurred in the conditioning of these allomorphs in that
-lu (ergative) and -la (locative-instrumental) are used with personal
proper name vowel stems, but -ŋku and -ŋka are used with common noun
vowel stems.

Most Pama-Nyungan languages have forms that are fairly obviously
derivable from proto *la ~ *ta. Kalkatungu (Q.) has locative

allomorphs -ṯi and -pia but these presumably represent an innovation
as the expected familiar forms can be found lurking on some irregular
high-frequency nouns and on adverbs, e.g. kuu-ŋka (*at the water*),
uṯiŋka (*behind, at the back*). Pitta-Pitta (Q.) has locative -ina but
the familiar forms can be found with other functions. -ŋa (<*-ŋka cf.
future S$_1$, A marker -ŋu <*-ŋku) expresses purpose, and -la expresses
indirect cause or reason (*drunk from rum*), a function often covered by
the ergative-instrumental or locative-instrumental in languages lacking
a separate 'causal' suffix.

The common locative forms are not well represented outside the
Pama-Nyungan family. Most non-Pama-Nyungan languages have an
exclusively locative suffix, a few exhibit syncretism of the LOCATIVE,
INSTRUMENTAL and AGENT (e.g., Alawa, N.T., Sharpe 1972) or LOCATIVE
and ALLATIVE (e.g., Gunwinggu, Arnhem Land, N.T., Carroll 1976).

2.1.3. Accusative

The accusative case does not occur much with nouns though it is
common with pronouns. It is used with all nominals in Pitta-Pitta (Q.),
except in the future tense (see 54, 55), and it is used with all
nominals in Wangkumara (Q., Breen 1976a:336-338), but in the latter
instance this is the result of suffixing case-marked pronouns to nouns
forming a system of class markers (see 26). As noted above, it is
used in the accusative language, Lardil, but separate accusative
marking is used in the future as opposed to the non-future.

A number of languages exhibit accusative marking on some classes of
nominals, usually personal proper names and/or kin terms or these
categories plus human nouns or plus human and animate nouns (see
Silverstein 1976).

The form of the accusative is commonly -ṇa or -nʸa. If we accept
Dixon's thesis that both the dental laminal and palatal laminal series
of phonemes in Australian languages derive from a common laminal series,
then the proto-form will be *-Nʸa where the capital represents a
laminal in a proto-language having only one series of laminals.

I see no evidence in the distribution of accusative marking with
nouns to suggest that accusative marking was increasing its territory
(i.e., 'spreading' from pronouns) or decreasing it. In some special
cases it probably spread, e.g. Wangkumara, for the rather special
reason that pronouns (marked for A and P) were suffixed to nouns, and
perhaps in Lardil as suggested earlier. In any case the distribution
of accusative marking as we find it is natural in the sense that it is
concentrated at the end of a scale that runs from inanimate through

animate, to human, to subclasses of human and this accords with
patterns of accusative marking in some non-Australian languages, e.g.
the use of a for definite, animate PATIENTS in Spanish, pe for human
PATIENTS in Roumanian, the use of the genitive for animate PATIENTS
in Russian, the accusative -(ii)g in Mongolian for human PATIENTS and
the use of -ko for animate PATIENTS in Hindi.[15]

There do not seem to be any examples of accusative marking with
nouns among the non-Pama-Nyungan languages. This is not too surprising
when one considers that they make greatly reduced use of case marking
for the major syntactic functions, relying instead on cross-referencing
pronouns. There is clear evidence in these cross-referencing pronoun
systems of accusative marking, and more particularly reflexes of -*Nʸa.
This is discussed in section 2.3.

2.1.4. Dative

A form -ku marks the dative in a very large number of languages.
Besides occurring in something like ninety per cent of the Pama-
Nyungan languages, it is also fairly well represented among the non-
Pama-Nyungan languages. Often there is a variant -wu following vowel-
final stems, with -ku occurring on consonant-final stems.

2.1.5. Summary

The following forms then can be reconstructed as belonging to some
remote proto language:

27.   ergative   -*lu   ~   -*tu

      locative   -*la   ~   -*ta

      accusative   -*Nʸa

      dative   -*wu   ~   -*ku[16]

The ergative was probably once more widespread than it is now, and
is likely to have been lost from languages like Ngarluma and Lardil
and from most of the non-Pama-Nyungan languages.

The accusative may have lost ground in the non-Pama-Nyungan
languages as they shifted the burden of syntactic case marking from
the use of case suffixes to cross-referencing pronouns.

The dative is likely to have been retained in form and function
from a remote proto-language, but has probably been extended to mark
P in Ngarluma, P in the future in Pitta-Pitta, and it has probably
been extended to marking purposive on verbs and also future tense (see
Blake 1976:421-424).

The LOCATIVE relation is expressed by a distinct marker over most
of Australia. The Pama-Nyungan languages tend to reflect a common
proto-form, the others express the relation by a variety of forms.

2.2. Free Pronouns
2.2.1. General

As indicated in 1.1 free form pronouns in the Pama-Nyungan
languages operate in an accusative paradigm whereas in other Australian
languages there is usually no case marking for S_1, A and P, either with
pronouns or with nouns. The accusative is almost always marked by
what is clearly a reflex of -*NYa.

In some Pama-Nyungan languages we find:

(a) Ergative as well as accusative marking on third person
pronouns, particularly if the forms are demonstrative in origin. This
is fairly common.

(b) Ergative as well as accusative marking on an odd person/
number combination or two. In a few instances this occurs with first
or second person singular.

(c) Ergative as well as accusative marking on all pronouns.

(d) Ergative marking rather than accusative marking on all
pronouns.

Major syntactic relations apart, the rest of the pronoun paradigm
is similar to the noun paradigm in most languages but rarely exactly
the same. There are usually some differences in the number of case
forms and in their actual shape or phonemic form. For one thing,
pronouns, certainly first and second person pronouns, are typically
human and the semantic category of locative is not much required though
comitative needs to be expressed.

In the area possessive-indirect object-purposive-benefactive the
pronoun paradigm often shows a different number of distinctions from
the noun paradigm of the same language but it is difficult to
generalise. Also we find that besides -ku ~ -wu, forms such as -ŋa,
-ŋu, -nta, -ta, -mpa are common. Usually the first and second person
singular have a different inflection in the dative (and genitive or
benefactive) from the other person/number combinations. Thus in
Warluwara (Q., Breen 1971) the first and second singular forms of the
dative are ŋaṯa and yinda, but all the other person/number combinations
consist of the nominative plus -ŋa. It is fairly common for the
oblique cases of pronouns to be built on a stem other than the

nominative. In Gumbainggir (N.S.W., Smythe 1948), the dative paradigm
runs: ls ŋa:nʸuŋ, 2s ŋi:nnu with the other first and second person
forms suffixed by -mba, e.g. ŋali-mba. Other oblique cases (except
for the accusative) are then built on this stem, e.g. ŋali-mba-la
(*we two* (inclusive) locative).

Some of the forms used to mark the dative (or genitive or
benefactive) with pronouns (and in some instances nouns) look like
locative allomorphs (e.g., -nta, -ta, -mpa) and indeed this is likely
to be their source. These forms do in fact occur as locatives with
nouns and pronouns in some languages, e.g. Warungu (Q., Tsunoda 1974:
180-181) ŋali-ŋu-nda, the locative of *we two* (-ŋu is the genitive).
Quite independently of the forms under discussion, the locative in a
number of Australian languages covers indirect object and allative
functions and when one considers the fact that locatives are not
going to be required very frequently with human referents it is not
surprising if locative allomorphs assume dative and similar functions.
-ŋu, though not clearly related to -*ŋka ~ *-la (see 2.1) is attested
as a locative in a number of Cape York languages and is the locative
for pronouns in Kalkatungu (Q.).   -ŋa is found in very many languages
including a number of non-Pama-Nyungan languages as a dative or
purposive.

2.2.2. Major Syntactic Relations
2.2.2.1. Pronoun Augmentation

The main feature of interest in the pronoun paradigm is the
distribution of nominative, ergative and accusative marking, especially
the distribution of the case forms with pronouns vis-à-vis their
distribution with nouns.

Before discussing the free pronouns, let us look at a typical Pama-
Nyungan pronoun paradigm. This example is from Warungu (Q., Tsunoda
1974:180-181). Only the nominative and accusative are shown, but there
are also two dative case forms, a locative, a comitative and an
ablative.

28. Warungu Pronouns

		Nominative S_1, A	Accusative P
Sing.	1	ŋaya	ŋan^{y}a
	2	yinta	yina
	3	n^{y}ula	n^{y}un^{y}a
Dual	1	ŋali	ŋalin^{y}a
	2	yupala	yupalan^{y}a
	3	pula	pulan^{y}a
Plural	1	ŋana	ŋanan^{y}a
	2	yura	yuran^{y}a
	3	t^{y}ana	t^{y}anan^{y}a

It will be noted that while in the non-singular the accusative is added to the nominative, in the singular the accusative contrasts with a nominative suffix added to a monosyllabic stem. If one examines these nominative suffixes to singular pronouns in a range of languages one finds that they seem to consist of

> (a) a syllable resembling an ergative marker;
>
> (b) a syllable -pa or -wa;
>
> (c) a syllable resembling an accusative marker.

Warungu probably falls into category (a) although this is not immediately obvious. In many languages however the nominative consists of a form such as ŋatu, or in a smaller number of languages, ŋaypa or ŋan^{y}a.

In a recent paper Dixon (1977) suggests that at an earlier stage Australian languages allowed monosyllabic words but then at a later stage they ceased to tolerate them - this is the situation in a majority of contemporary languages. He suggests that at an earlier stage the singular pronouns operated with ergative and accusative marking and that when monosyllabic words became proscribed the S_1 forms were augmented by extending the ergative form to cover S_1 as well as A or by augmenting with a syllable -pa (widely used in Australia as a phonological filler) as suggested earlier by Hale. In this way he seeks to account for the appearance of an 'ergative looking' marker

on the S_1 form of pronouns. If the ergative form was extended to
embrace S_1, an accusative system resulted; if -pa was added, a three-
way system of marking resulted.

There seems to be no doubt that the singular pronouns have been
augmented. Dixon's argument concerns only first and second person
where the proto-forms are reflected almost ubiquitously, but I think
that the argument can be applied to the fairly widespread third person
singular forms (see examples in 34. below). Moreover, I think that
-N^{y}a can be added to the list of morphemes used as augments (see
below). However, I wonder if an early proto-language had ergative
as well as accusative marking for first and second person singular.
This seems to involve positing a rather unusual proto-language. It
may be that in some instances the ergative form of nouns was simply
extended to cover both S_1 and A with pronouns. There is some evidence
to support Dixon's position. In some languages that have retained
the use of monosyllabic words, we find a system nearly identical to
that posited by Dixon for the proto-language. For example, in Gabi
(SE. Q., Mathew 1910:208, quoted by Dixon 1972:7) we find,

29.   Gabi

	first singular	second singular
S_1	ŋay	ŋin
A	ŋayd^{y}u	ŋindu
P	ŋana	ŋina

Also in the related language, Duungidjawu (SE. Q., Wurm 1976) we find
much the same thing,

30.   Duungidjawu

	first singular	second singular
S_1	ŋai	ŋin
A	ŋad^{y}u	(ŋ)indu
P	ŋan^{y}a	(ŋ)ina

No language seems to have a form of ergative provenience marking
S_1 but not A. However, whether the ergative once functioned with
singular pronouns or was extended from nouns to cover S_1 and A, the
same distribution would result. It would not normally happen that a
language would extend an ergative from nouns to S_1 pronouns without
embracing A pronouns.

Almost without exception bound pronoun systems operate accusatively
for all person/number combinations and they presumably reflect the
earlier system operating with free pronouns. This would argue against
Dixon's suggestion that the free singular pronouns had a distinct A
form.

Dixon's list of augments can probably be extended to include -*Nʸa.
Consider the following forms from Nyungar(SW. W.A., O'Grady et al.
1966:131) and Kunggari (Blackall, Q. - not to be confused with
Gunggari, Roma, Q., Breen field notes).

31. Nyungar

	first singular	second singular
S_1	ŋanʸa	nʸini
A	ŋatʸu	nʸuntu
P	ŋanʸa	nʸini

32. Kunggari

	first singular	second singular
S_1	ŋana̱	yina
A	ŋa̱t̠u	yinti
P	ŋana̱	yina

Perhaps the ergative systems that have resulted in these cases (at
least with first and second singular) could be taken as supporting
Dixon's putative proto-system. The 'accusative looking' form for S_1
would be seen as an extension of the accusative for the phonological
reasons, the ergative would be seen as 'original'.

How common the use is of -*Nʸa as an augment can only be answered
after some problems of historical phonology are solved. A number of
languages in south-west Queensland have forms such as ŋanʸi (first
person S_1), (y)ini (second person S_1) and since some have ŋani for
first person plural where other languages have ŋana, it is likely that
ŋanʸi derives from ŋanʸa by regular sound change.

There are a number of phonological problems involved in deriving
some attested forms from the proto-forms. Dixon suggests ŋay + tu[17]
as the proto-sequence for the first person and nʸun or ŋin + tu for
the second. These allow the straightforward derivation of forms such
as ŋaytʸu, ŋatʸu or ŋa̱t̠u and nʸuntu or ŋintu. Certainly lenition of
Nʸ to y has occurred in some languages; see for instance the Warungu

second person singular, dual and plural forms in 28. Similarly
vowel reduction has occurred producing forms such as Warungu yinta
from *NⁿYintu and yupala from *NⁿYumpalu. However, although a form
such as ŋayu in Garawa (Q., Furby 1972) probably derives from ŋay + tu
via ŋaTⁿYu, a form such as Warungu ŋaya could derive from ŋay + tu via
ŋaTⁿYu > ŋayu > ŋaya (cf. yinta) or by simply repeating the vowel of
ŋay. This is a common augmenting principle among the world's languages
and is attested in Australia, e.g. assimilating English words to
vernacular phonemotactic patterns. A similar doubt arises with a not
uncommon form for the second person, viz. nⁿYini. Is the i an
assimilated a, nⁿYini reflecting *NⁿYin + NⁿYa, or is nⁿYini derived from
nⁿYin by repeating the vowel? There are also problems in sorting out
some of the stems. Is the second person NⁿYin, NⁿYun, ŋin or ŋun?
What is the significance of y in ŋay, an element which does not appear
in the dual or plural? What is the significance of -n in NⁿYin etc.,
another element that does not appear in the dual or plural? However,
the problem of the stems is not directly relevant to the question of
the development of the case marking.

If we accept that forms like ŋatⁿYu, nⁿYinti etc. reflect ergative
morphemes in their second syllables, this has important consequences
for the non-Pama-Nyungan languages. Since these lack case marking in
most instances for the major syntactic functions, the question of the
relationship between this system and the Pama-Nyungan system arises.
As we noted in 2.1.1, a scattered minority of non-Pama-Nyungan
languages exhibit ergative marking on nouns and pronouns and this
scattering probably represents the relics of a widespread if not
ubiquitous system. Further evidence of former ergativity can be found
in the pronoun forms for the singular in some of these northern
languages. Consider the following,

33.

	First Person	Second Person
Tiwi	ŋia	ŋinta
Gunbalang	ŋayi	ŋuta
Yiwadja	ŋabi	ŋuyi
Djingili	ŋaya	nⁿYama
Worora	ŋayu	ŋunⁿYdⁿYu
Gunwinggu	ŋaye	ŋuda
Maranunggu (Daly R.)	ŋanⁿY	nina
Pungu-Pungu (Daly R.)	ŋetⁿYe	kene

These examples have been chosen more or less at random. It would
have been possible to select a sample specifically to bring out the
number of 'ergative looking' forms to be found among the non-Pama-
Nyungan languages, but as it is one can see a sprinkling of forms that
probably reflect the ergative marker. There is no suggestion that
these reflect an ergative system however, only that they reflect an
ergative marker. They could well reflect a marker that had been
generalised to S_1 from A or from the noun paradigm.

In 2.1.1 I suggested that Lardil may have moved from being
ergative to accusative. It is worth recording that the S_1, A pronouns
for first and second singular are ŋata and ŋʸiŋki respectively. These
seem likely to reflect the ergative marker in the second syllable.

The following table gives examples of singular pronouns in S_1, A
and P forms for a number of Pama-Nyungan languages. The first dual
is given also as an example of a disyllabic stem where the putative
augmentation did not take place.

The suggested lines of development outlined above account for most
of the forms that appear. Dyaabugay illustrates another feature not
mentioned above, namely the use of the plural stem nʸura for the
singular stem, a change reminiscent of the replacement of *thou* by *you*
in English and a change that occurs sporadically over the continent.

The table has an eastern Australian bias but the deficiency is made
good in example 40 where a number of Western Australian forms are
quoted. In some of the Western Australian languages augmentation has
occurred more than once as can be seen by inspecting Table 40. This
additional augmentation is discussed in the text following 40.

34.

		1s	2s	3s	1du
Warluwara Q.	S_1	ŋaṇa	yipa	yiwa	ŋali (inc)
	A	ŋaṇa	yipa	yiwa	ŋali
	P	ŋaṇa	yina	yinʸa	ŋaliṇa
Pitta-Pitta Q.	S_1	ŋanʸtʸa	(y)inpa	ṉuwa-	ŋali
	A	ŋaṯu	(y)intu	ṉulu-	ŋalilu
	P	ŋaṇa	(y)ina	(y)iṇa-	ŋaliṇa
Bidjara Q.	S_1	ŋaya	yinda	ṉula	ŋali
	A	ŋaya	yinda	ṉula	ŋali
	P	ŋadʸuna	yuna	ṉuṉuna	ŋalinʸana

		1s	2s	3s	1du
Garawa Q.	S₁	ŋayu	ninʸdʸi	nʸulu	ŋali
	A	ŋayu	ninʸdʸi	nʸulu	ŋali
	P	ŋana	niŋa	∅	ŋalinʸa
Yalarnnga Q.	S₁	ŋia	n̠awa		ŋa̠li
	A	ŋa̠tu	n̠ulu		ŋa̠lu
	P	ŋia	n̠awa		ŋa̠li
Kalkatungu Q.	S₁	ŋai	nʸini		ŋa̠li
	A	ŋa̠tu	nʸinti		ŋa̠liyi
	P	ŋai	nʸini		ŋa̠li
Ngawun Q.	S₁	ŋayu	yuntu		ŋali
	A	ŋayu	yuntu		ŋali
	P	ŋana	yira		ŋalinta
Dyaabugay Q.	S₁	ŋawu(ŋku)	nʸura		ŋanʸtʸi (non sg)
	A	ŋawu(ŋku)	nʸura		ŋanʸtʸi
	P	ŋanʸa	nʸuranʸ		ŋanʸtʸinʸ
Duungidjawu Q.	S₁	ŋai	ŋin	yo:(ru)	ŋa:m
	A	ŋadʸu	(ŋ)indu	yo:(ru)ndu	ŋa:mbu
	P	ŋanʸa	(ŋ)ina	yo:ŋa	ŋa:mma
Warungu Q.	S₁	ŋaya	yinda	nʸula	ŋali
	A	ŋaya	yinda	nʸula	ŋali
	P	ŋanʸa	yina	nʸunʸa	ŋalinaʸa
Dharawal NSW	S₁	ŋayagaŋ	nʸindigaŋ		ŋalgaŋ (inc)
	A	ŋayagaŋga	nʸindigaŋga		ŋalgaŋga
	P	ŋayagaŋ	nʸindigaŋ		ŋalgaŋ
Madi-Madi Vic.	S₁	yidi	ŋindi		ŋali
	A	yidi	ŋindi		ŋali
	P	yinan	ŋinan		ŋalin

		1s	2s	3s	1du
Narinyari	S_1	ŋapi	ŋinti	kit^{y}i	ŋel
SA	A	ŋati	ŋinti	kili	ŋel
	P	ŋan	ŋum	kin	lam

2.2.2.2. Free Pronouns in an Ergative Paradigm

As noted earlier the free pronouns in some languages operate in an ergative paradigm. The set of languages exhibiting this feature is as follows:

(a) Warnman, Dyaru, Yulbaridja, Walmatjari, Walbiri, Pintupi (a roughly contiguous set extending over an area in the northern W.A. and into N.T.).

(b) Dharawal and some related languages as in Eades 1976 (south coast of N.S.W.).

(c) Rembarnga, Ngandi (Arnhem Land N.T.), Muriny Pata (Port Keats N.T.).

(d) Kalkatungu, Yalarnnga, (Kunggari?) (western Q.).

In some instances at least it is possible to find evidence to suggest that the ergative pronoun paradigm is an innovation. Warnman (W.A., O'Grady et al. 1966:136-7) has a set of free form pronouns that consist of a stem para to which forms marking person and number are suffixed,

35.

	1st Person	2nd Person
Sing	para-ø	para-ŋku
Dual	para-ø-kut^{y}ara	para-ŋku-kut^{y}ara
Plural	para-ø-waṭa	para-ŋku-waṭa

This system seems to have derived from an earlier auxiliary or catalyst particle plus a bound pronoun. Catalyst particles to which bound pronouns are attached are a feature of the area and -ŋku is not only synchronically the second person S_1, A bound pronoun in Warnman, it is the S_1, A bound pronoun in a number of Western Desert languages. It seems fairly clear that a combination of catalyst particle plus bound pronoun has usurped the position of an earlier free pronoun. If this is so, it is not surprising to find that the new forms operate in an

ergative paradigm since this would have been the only paradigm avail-
able as a model when the earlier free pronouns fell into disuse.

The following example illustrates the use of the 'new' free
pronouns and the cross-referencing pronouns. The free pronouns are
optional.

   36. para-ø-lu-ṇa-ŋku   paralʸi   tʸinka-ṇa para-ŋku-ku

       pronoun-*I*-erg-*I*(S)-*you*(P) *boomerang make*-past pro-*you*-dat

       I made a boomerang for you.

In other languages in the area that have ergative pronoun paradigms,
there is evidence that the free pronouns for the major syntactic
functions have been recreated probably on the basis of oblique forms.
This is in fact Hale's suggestion regarding Walbiri (Hale 1973b:340),

> 'The process of destressing and cliticising 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.'

The evidence is largely the discrepancy between the actual shapes of
the bound forms and the shapes of the free forms (as pointed out by
Hale), plus the regularity of the ergative affixation. Consider the
following forms from Dyaru (W.A., Tsunoda p.c.) where both these
features are evident,

37. Dyaru Pronouns

   (a) Free Forms

		S_1, P	A
Sing.	1	ŋat^{y}u	ŋat^{y}u-ŋku
	2	n^{y}untu	n^{y}untu-ku
	3	n^{y}antu	n^{y}antu-ku
Dual	1 inc	ŋali	ŋali-ŋku
	ex	ŋat^{y}ara	ŋat^{y}ara-lu
	2	n^{y}unpula	n^{y}unpula-lu
	3	n^{y}anpula	n^{y}anpula-lu
Plural	1 inc	ŋalipa	ŋalipa-lu
	1 ex	ŋanampa ~ ŋanimpa	ŋanampa-lu ~ ŋanimpa-lu
	2	n^{y}uraa ~ n^{y}uraṛa	n^{y}uraa-lu ~ n^{y}uraṛa-lu
	3	n^{y}antu	n^{y}antu-ku

   (b) Bound Forms

		S	P
Sing.	1	-ṇa	-yi
	2	-n	-ŋku
	3	-∅	-∅
Dual	1 inc	-li	-alin^y
	ex	-liya(r)	-yiraŋ ~ -yaraŋ
		-npula	-ŋkuwuka
		-wula	-wula(y)anu ~ -wulan^y
Plural	1 inc	-liwa	-alin^{y}pa ~ -ŋalipa
		-ṇalu	-(ŋ)animpa ~ (ŋ)anampa
		-nta(lu)	-n^{y}ura
		-lu	-(y)anu

The discrepancy between the bound forms and the free forms can be
gathered from an inspection of the table. Note that some of the
accusative bound forms are marked by $-n^y(-)$, clearly a reflex of
the accusative marker that is found over most of Australia. The
allomorphs of the ergative marker on the free pronouns are distributed
according to the principle operating with nouns: $-\eta ku$ occurs with
disyllabic stems (dissimilating to $-ku$ if there is a nasal stop
cluster in the stem) and $-lu$ occurs with longer stems.

Dyaru then seems to have formed a new series of free forms for
S_1, A and P and to have modelled them on the noun paradigm with one
form for A and another for S_1/P. The same line of argument can be
followed with the other languages listed under (a) above.

Of the languages noted under (b), namely those languages of the
south coast of N.S.W. treated by Eades (1976), it is generally true
that the free pronouns exhibit ergative allomorphs distributed as for
nouns, at least insofar as there is evidence available. There are
also systems of bound pronouns in use, and all in all it seems as if
the suggestion made about Dyaru could be repeated in the case of
these languages.

In one language of this area, Gundungurra, we find a system the
same as that described above for Warnman. The free pronouns consist
of a base gula- to which bound pronouns are suffixed,

38.	Sing.	1	gula-ŋga
		2	gula-n^{y}d^{y}i
	Dual	1 inc	gula-ŋa
		1 ex	gula-ŋgulaŋ
		2	gula-mbu
	Plural	1 inc	gula-mban^{y}an
		ex	gula-mban^{y}ila
		2	gula-mba<u>n</u>du

The bound pronouns exist independently of their use with -gula.
Presumably this system has the same genesis as that proposed for the
Warnman system.

Of the non-Pama-Nyungan languages exhibiting an ergative pronoun
paradigm, Rembarnga, Ngandi and Muriny Pata, Ngandi can easily be
accounted for. Heath (forthcoming b) demonstrates convincingly that

Ngandi has borrowed its ergative marker from the neighbouring Pama-Nyungan language, Ritharngu. The use of this ergative marker with pronouns reflects a situation in which an introduced functional morpheme is generalised to all nominals.

In the case of Rembarnga (McKay 1975) and Muriny Pata the only evidence of possible innovation lies in the fact that the bound pronouns operate in an accusative system and this presumably would reflect the earlier free pronoun paradigm.

As for the remaining languages, Kalkatungu exhibits a discrepancy between the shape of its bound pronouns and its free ones, so one would expect that the free forms represent a relative innovation. Yalarnnga has virtually no bound pronouns. Kunggari may or may not exhibit an ergative pronoun paradigm. It certainly does in the first and second singular (see 32) but the information available on the other person/number combinations is incomplete.

On balance then one could say that since bound pronoun paradigms probably reflect an earlier system and since bound pronouns operate in an accusative system, the free pronoun paradigms were once accusative. We have also seen that in the case of some of the languages with ergative pronoun paradigms, there are additional reasons for believing the ergative system to be a comparative innovation.

2.3. Bound Pronouns

If we consider bound pronouns in Australian languages, we can classify languages into four types along a *seriation* scale thus:

(a)   languages with no bound pronouns

(b)   languages with bound pronouns that are transparently
       abbreviated forms of the free pronouns

(c)   languages with bound pronouns that are not simply
       abbreviated forms of the free pronouns

(d)   languages with bound pronouns that exhibit fusion
       and various irregularities in transitive clauses
       (where the bound pronouns for A and P are juxtaposed)

2.3.1. Languages with no Bound Pronouns or 'Abbreviated' Free Pronouns

It is interesting to note that most of the languages lacking bound pronouns are to be found in a contiguous area running from the Great Australian Bight in South Australia to the Gulf of Carpentaria in Queensland (see map). This suggests that the process of developing

bound pronouns or dropping them is subject to diffusional pressure, but leaves the question of whether the 'boundless' languages are ones which have not developed bound pronouns or whether they are ones which have lost them. One cannot apply stratigraphical arguments to the distribution of 'bound' and 'boundless' languages in the way one can with the distribution of lexical items. Since the form of lexical items is, in almost all cases, arbitrary, a discontinuous distribution as opposed to a continuous one must normally be interpreted in terms of the continuous area representing an innovation and the discontin- uous one representing a conservative form. However, with the choice between 'bound' and 'boundless' languages we are not dealing with an arbitrary expression-content relationship, rather it is the case that a language can develop bound pronouns from free ones (where else could they come from?) and it can also lose bound pronouns, as has been the case in Europe, for instance. In any case, the stratigraphical evidence is ambiguous since there are discontinuous 'boundless' areas (NW. W.A., tip of Cape York) as well as discontinuous 'bound' areas.

Gavan Breen points out that if the boundless languages had lost bound pronouns, one would expect to find vestigial evidence of this and in fact there seems to be practically none (but see below). There are one or two instances of isolated bound pronouns, e.g. Yalarnnga -n̪u marking the S_1 or A of imperatives, but often, as in this case, their transparent relation with free forms suggests innovation.

One can see the force of this argument if one considers developments in Europe. Pronouns functioning as S_1 and A (subject pronouns) were suffixed to verbs, became unstressable, and in many cases monophonemic, and were supported by optional free forms for the purposes of emphasis, contrastive stressing and the like. Thus in Latin the first person singular (at least in some active tenses) was represented by -m as in amabam (*I used to love*), with ego available when the first person singular was to be stressed. In French, ego appears as a proclitic /ʒə/, which has become unstressable, so that the disjunctive moi has to be introduced to allow the first person singular to be emphasized, moi, je t'aime (*I love you*). In general an older layer of bound pronouns shows up as a set of verb inflections, and even in English, the European language to have lost most of its inflections, a third person singular form is retained in *he comes*, etc. where -s reflects a pronoun, ultimately a demonstrative (being an Anglian form of Germanic *-θ<I.E.*-t). In sum it appears that one can expect bound pronouns, if they are lost at the expense of a set of free forms, to disappear gradually, leaving vestiges on the verb or wherever they were affixed.

On the other hand one cannot dismiss entirely the possibility of a
kind of pidginisation involving the sudden and complete loss of bound
pronouns. In Kalkatungu, for instance, where bound pronouns are
optional in non-dependent clauses (at least with most tense/aspect
markers), informants will normally omit them for the benefit of a
struggling European linguist. One can imagine circumstances involving
inter-tribe bilingualism in which a pidginised form of the language
ousted an earlier, morphologically irregular paradigm, a process which
can be observed in a number of present day Aboriginal communities
where the natural transmission of the language to the younger
generation is suffering from competition with English.

However, when one considers that those languages bordering on the
boundless area for the most part exhibit bound pronouns that are
patently abbreviated free forms, it supports the contention that the
development is largely, if not entirely, a one-way development from
'boundless' to 'bound'.

Breen (p.c.) claims specifically in the case of Badjiri (Q.) that
it borrowed the system of bound pronouns but not the forms from the
neighbouring Gunya (Q.). Similarly, Heath (forthcoming) demonstrates
that Ritharngu, a Pama-Nyungan language of the Pama-Nyungan enclave
in north-east Arnhem Land, developed bound pronouns under the influence
of Ngandi, a neighbouring non-Pama-Nyungan language which makes
extensive use of cross-referencing bound pronouns. Ritharngu
developed the bound pronouns from its own free pronouns and is the
only Pama-Nyungan language of the Arnhem Land enclave to have developed
such forms.

One area where there does appear to have been a kind of loss of
bound pronouns is northern Cape York where the former bound forms are
suffixed to the free forms obligatorily and hence no longer function
as bound pronouns. In Mpalityanh, for example, the first person
singular S_1, A form is ayu-ŋ.   -ŋ is a reflex of a bound form of the
pronoun. Independently of this the initial velar nasal of the stem
*ŋayu has been lost as part of a general 'initial dropping' change.
Similarly in Yinwum, first dual inclusive is le-l, where le reflects
*ŋali with loss of the initial syllable and -l ultimately reflects
the same stem having been used as a bound form (Hale 1976b:30). In
Yinggarda (W.A., O'Grady et al. 1966:118) the first person S_1, A bound
pronoun has become permanently suffixed to the free form. -ŋa remains
as a means of indicating first singular, but the free form is no
longer *ŋaṯa but ŋaṯaṇa.

To clarify the preceding generalities the following examples are presented. The first is from Narinyari (S.A., Yallop 1975:40) and illustrates a language in which the bound pronouns are patently reduced forms of the free ones.

	1st Person free/bound	2nd Person free/bound	3rd Person free/bound
Sing.	ŋapi/-api	ŋinti/-inti	kitʸi/-itʸi
Dual	ŋel/-aŋel	ŋurl/-uŋurl	keŋk/-eŋk
Plural	ŋurn/-arn	ŋuni/-uŋun	kar/-ar

Narinyari is one of the few languages in which ergative forms appear, thus

	Nominative free/bound	Ergative free/bound
1 Sing.	ŋapi/-api	ŋati/-ati
3 Sing.	kitʸi/-itʸi	kili/-ili
3 Dual	keŋk/-eŋk	keŋkul/eŋkul

The few examples of ergative bound forms occur in eastern Pama-Nyungan and where they occur in general they reflect the comparatively recent derivation of the bound forms from the free forms.

In general, bound pronouns in eastern Pama-Nyungan languages bear a transparent relation to their free counterparts. Capell gives a number of examples from New South Wales languages in his *New Approaches* (Capell 1956:16-17).

2.3.2. Languages with Bound Pronouns Distinctly Different from the Free Pronouns

The following table is presented mainly to illustrate languages in which there is some discrepancy between the shape of the bound pronouns and the shape of the corresponding free ones. However, it has been extended to cover most of the Pama-Nyungan languages of Western Australia and of the adjacent parts of the Northern Territory and South Australia, since a number of interesting factors can be found within this range. Only the first and second person singular has been shown. In general there is a closer correspondence between free forms and bound forms in the other person/numbers.

40. Western Pama-Nyungan Pronouns

		Free				Bound		
		S_1	A	P	DAT	S_1,A	P	D
Ngarla	1s	ŋaya, nayi						
	2s	n^yinpa						
Nyamal	1s	ŋat^{y}a			ŋat^{y}uku	-ṇa		
	2s	n^yunta						
Bailko (Balygu)	1s	ŋaṯa	ŋaṯalu			-ṇa	-t^{y}a	-t^{y}u
	2s	n^yinta				-npa		
Bandjima	1s	ŋaṯa	ŋaṯa	ŋat^{y}u	ŋat^{y}u			
	2s	n^yinta	n^yinta	n^yinku	n^yinku			
Yindjibarndi	1s	ŋayi	ŋayi	ŋayu	ŋayu			
	2s	n^yinta	n^yinta	n^yinku	n^yinku			
Ngarluma	1s	ŋayi	ŋayi	ŋat^{y}u	ŋat^{y}u			
	2s	n^yinta	n^yinta	n^yinku	n^yinku			
Dhalandji	1s	ŋaṯa	ŋaṯa	ŋaṯaṇa	t^{y}uṯi			
	2s	n^yinta	n^yinta	n^yintaṇa	n^yintama			
Buduna	1s	ŋaya						
	2s	ŋiˑ						

		Free				Bound		
		S₁	A	P	DAT	S₁,A	P	D
Bayungu	1s	ŋaṯa	ŋaṯa	ŋaṯaṇa	ŋaṯaŋu			
	2s	nʸinta	nʸintalu		nʸintaŋu			
Thargari	1s	ŋaða	ŋaða	ŋaðaṇa	ŋanayi			
	2s	ṉura	ṉura	ṉuraṇa	ṉuraba			
Yinggarda	1s	ŋaṯaṇa	ŋaṯaṇa	ŋaṯa		-ṇa		
	2s	nʸinta	nʸintalu	nʸintaṇa	nʸintaŋu	-npa	-nta	-ŋu
Nhanda	1s	ŋayi	ŋayi	ŋayiṉa	ŋayu·	-wa	-ṉa	-ṯv
	2s	nʸini	nʸini	nʸiniṉa	nʸiniyu	-nʸtʸv,-nʸa	-ṇṯa	-nʸku
Wadjug	1s	ŋanʸa	ŋatʸu	ŋanʸa				
	2s	nʸini	nʸuntu	nʸini				
Nyungar	1s	ŋanʸ,ŋetʸ	ŋanʸ,ŋetʸ	(ŋ)anʸ	(ŋ)anʸ			
	2s	nʸintak	nʸintak	nʸininʸ	nʸinak			
		nʸunak	nʸunak	nʸunanʸ	nʸunaŋ			
East Mirniny	1s	ŋaṯu	ŋaṯu	ŋaṇaṇa	ŋaṇiya			
	2s	ŋuṇṯu			ŋuṇṯiya			
Gugada	1s	ŋayulu	ŋayulu	ŋayunʸa	ŋayugu			
	2s	nʸura	nʸura	nʸuranʸa	nʸuramba			

		Free				Bound		
		S_1	A	P	DAT	S_1,A	P	D
Ooldean (Ngalia)	1s	ŋayulu	ŋayulu	ŋayunʸa	ŋayuku	(-ṇa)		
	2s	nʸura	nʸura	nʸuranʸa	nʸurampa			
Pitjantjatjara	1s	ŋayulu	ŋayulu	ŋayunʸa	ŋayuku	-ṇa	-ṇi	-tʸu
	2s	nʸuntulu	nʸuntulu	nʸuntunʸa	nʸuntuku	-n	-nta	-nku
Pintupi	1s	ŋayunʸa	ŋayulu	ŋayunʸa	ŋayuku	-ṇa	-ṇl	-tʸu
	2s	nʸuranʸa	nʸuralu	nʸuranʸa	nʸuraku	-n	-nta	-ŋku
Yulbaridja	1s	ŋayu	ŋayulu	ŋayu	ŋayuku	-ṇa	-tʸa	-tʸu
	2s	nʸuntu	nʸuntulu	nʸuntu		-n	-nta	-ŋku
Nyangumarda	1s	ŋatʸu	ŋatʸulu		ŋatʸuku	-ṇV	-nʸi, -nʸa	-tʸi, -tʸu
	2s	nʸuntu				-n	-ntV	-ŋu
Garadjari	1s	ŋatʸu	ŋatʸulu		ŋatʸuku	-ṇa	-nʸa	-tʸa
	2s	nʸuntu	nʸuntulu			-n	-nta -ŋgu	-ŋgu
Mangarla	1s	ŋayu	ŋayuŋku	ŋayu	ŋayuku	-ṇa	-nʸa	-tʸa
	2s	nʸuntu	nʸuntuŋku	nʸuntu	nʸuntuku	-n	-na	-ŋka
Walbiri	1s	ŋatʸu(lu)	ŋatʸu(lu(ḷu))	ŋatʸu(lu)	ŋatʸuku	-ṇa	-tʸu	-tʸu
	2s	nʸuntu(lu)	nʸuntu(lu(ḷu))	nʸuntu(lu)	nʸuntuku	-n pa	-ŋku	-ŋku

		Free				Bound		
		S_1	A	P	DAT	S_1,A	P	D
Mudbura	1s	ŋayi	ŋayi	ŋayinʸa		-ṇa	-yi	
	2s	nʸuntu	nʸuntu	nʸununʸa		-n	-ŋku	
Guurindji	1s	ŋayu	ŋayu	ŋayinʸ		-ṇa	-yi	
	2s	nʸuntu	nʸuntu	nʸuntu		-n	-ŋku	
Dyaru	1s	ŋatʸu	ŋatʸuŋku	ŋatʸu		-ṇa	-yi	
	2s	nʸuntu	nʸuntuku	nʸuntu		-n	-ŋku	
Walmatjari	1s	ŋatʸu	ŋatʸuŋu	ŋatʸu	ŋatʸuwu	-ṇa	-tʸa	-tʸi
	2s	nʸuntu	nʸuntuŋu	nʸuntu	nʸuntuwu	-n	-nta	-ŋu

It is interesting to note that of the languages illustrated, only
Bandjima, Yindjibarndi, Ngarluma, Wadjug, Nyungar and Mirniny have
pronoun systems in which the oblique case marking is suffixed to a
monosyllabic stem in the first and second singular, i.e. only these
languages pattern like the Pama-Nyungan languages of eastern Australia
as described in 2.2.2.1. All the rest have disyllabic stems.
Contrast the A and P forms in Nhanda and Wadjug,

	A	P
Nhanda (disyllabic)	ŋayi	ŋayi-n̠a
Wadjug (monosyllabic)	ŋa-tʸu	ŋa-nʸa

Note in particular the distribution of the 'monosyllabic stems' on
the map. They are all peripheral. Note too the distribution of
languages with bound pronouns and those without bound pronouns and
see the correlation between monosyllabic stems and lack of bound
pronouns. No language in the area covered has bound pronouns and
monosyllabic stems (though some have disyllabic stems and no bound
pronouns):

	✓	✓	✓	x
disyllabic stems	+	+	-	-
bound pronouns	-	+	-	+

    The first person disyllabic stems involved are ŋatʸV-, ŋata-, ŋayi-,
ŋayu- and ŋatʸu-. It is fairly clear that these are ergative in
origin. The possibility that they derive from a dative and locative
source (unlikely on semantic/syntactic grounds), a possibility raised
by the similarity of some of the forms with some dative and locative
forms, is ruled out by the clearly ergative shape of the second
person nʸuntu (nʸunta being the only other variant).
    What appears to have happened is that analogy has operated on the
first and second singular to bring them into line with the other
person/number combinations of the pronoun paradigm and indeed into
line with all other nominals. With other nominals the case suffixes
would have been attached to the nominative, as they still are, whereas
in the first and second singular there would have been an actual
nominative suffix so the other case suffixes would have been attached
to a stem.

41a. Putative earlier system

	S_1, A	P (standing for rest of paradigm)
first singular	ŋa-t^{y}u	ŋa-n^{y}a
first dual	ŋali-∅	ŋali-n^{y}a

41b. System after assumed reshaping

	S_1, A	P
first singular	ŋat^{y}u-∅	ŋat^{y}u-n^{y}a
first dual	ŋali-∅	ŋali-n^{y}a

I doubt whether this represents an innovation made at a stage that we might think of as proto-western-Pama-Nyungan but rather an innovation that diffused from a non-peripheral area. The peripheral languages with monosyllabic pronoun stems are quite similar overall to the languages with disyllabic pronoun stems, certainly not a significantly different substratum (though that is not to say that they lack substratum features entirely). In the case of the other feature that is distributed geographiclly in much the same way as disyllabic stems, viz. bound pronouns, we find that similar languages sometimes fail to share the feature. Ooldean (Ngalia), Gugada and Pitjantjatjara are quite similar, but only Pitjantjatjara has bound pronouns. Ooldean does exhibit some instances of -ŋa (first person singular). As I stated earlier, I believe that the bound pronoun principle was probably spreading rather than receding, but the considerable discrepancy between the bound and free forms is disturbing.

A number of other developments must have followed the introduction of disyllabic stems in the singular. As noted in 2.2.2.2, a number of the northern languages under consideration developed an ergative system of pronouns. On the evidence available to me it is not clear whether Nyangumarda, Garadjari and Mangarla have completely ergative paradigms; Mangarla appears to have mostly a three-way system. Pintupi has developed an ergative system with -n^{y}a generalised to S_1. A number of languages in the area have generalised -n^{y}a to S_1 with some classes of nominals. This development is not isolated. Pitjantjatjara and some adjacent languages have transferred -lu from the noun paradigm to the pronoun paradigm, extending it from A to S_1 and A, an interesting development in light of the putative augmentation discussed in 2.2.2.1.

However, the main reason Table 40 was presented was to illustrate

the discrepancy between the shape of the bound pronouns and the free
pronouns. In almost all the languages in the area that have bound
pronouns, the first person singular S_1, A bound form is -ŋa. There
is virtually no possibility of relating this to ŋa via sound changes.
Warluwara (Q., Breen 1971), a Pama-Nyungan language that does not
employ bound pronouns, has ŋaɲa as its first person singular S_1, A
free form, and so does Yanyula (N.T., Kirton 1964), a non-Pama-
Nyungan language on the southern coast of the Gulf of Carpentaria.
These languages may retain a relic of the free form from which -ŋa is
derived. Warluwara is not far from the periphery of the languages
under discussion and indeed is contiguous with Kalkatungu which can
be shown to be an outlier of western Pama-Nyungan. Yanyula is some
distance to the north but Yanyula and Warluwara share strikingly
similar pronoun paradigms (Breen p.c.) though geographically separated
and typologically quite different.[18] As can be seen from the table,
Mirniny has ŋaɲa-ŋa as the free P form for first person. This too
looks like a relic of the form from which ŋaɲa must have been derived.
There is no need to posit ŋaɲa as having occurred in proto-western-
Pama-Nyungan nor indeed directly in the history of any one language
in which it is now found. All that needs to be posited is a form
*ŋaɲa in a language in which bound pronouns developed. Loss of the
first syllable of a disyllabic stem and retention of the second
syllable is very common in the formation of bound pronouns from free
ones. It must be remembered that ŋaɲa is disyllabic. In explaining
the development of disyllabic stems in western-Pama-Nyungan, earlier
monosyllabic stems were posited. We need to posit *ŋaɲa as a source
of ɲa and *ŋay+lu as a source of the disyllabic (and monosyllabic)
stems. The continuous distribution of both these features is strongly
suggestive of diffusion. There is no theoretical difficulty in
positing these as sources occurring independently at some stage of the
history of the area.

   The first person bound form for P is represented by -tʸa, -ɲi,
-nʸa, -tʸu and -yi. -nʸa is simply a reflex of the accusative marker
(see Capell 1962:80 re Garadjari). -tʸu is a dative in origin. Note
that it is distinctively so in Yulbaridja for instance and represents
a syncretism of P and DATIVE in Walbiri. Its ultimate origin is
plausibly -*ku(*ŋay + ku > ŋatʸu). Compare the corresponding second
person forms. -yi is a dative form also and occurs only in some of
the languages where P and DATIVE are syncretised in the bound forms.
The evidence is the parallel appearance of -ku with the other person/
number combinations and the parallel vowel shift and lenition of the

S_1, A form (*ŋat^{y}u > ŋat^{y}l > ŋayl) at least in Mudbura.[19] -t^{y}a in
form is plausibly a locative; compare the parallel form -ta with the
second person. If this assumption is correct, it suggests a system
in which P was marked by a locative in the first and second singular.
-ŋi is even more difficult to explain but the Mirniny free form dative
ŋaṇiya (alongside accusative ŋaṇaṇa) is suggestive. Where it occurs,
it is parallelled by -ta in the second person.

   Of the second person forms, -n for S_1, A is a not unexpected reflex
of *N^{y}Vn, and -npa is simply -n plus -pa, a phonological filler added
in some languages that do not allow final consonants (cf. Hale 1973b).
The P form -nta is interesting in that it looks as if it might reflect
the locative *-la (cf. 2.1.2, 2.2.1). -ŋku occurs only where there is
a syncretism of P and DATIVE, but note that -nta and the corresponding
first person forms contrast with dative forms in a number of languages.

2.3.3. Languages with Fused, etc. Bound Pronouns

   The final stage of the development of bound pronouns can be illus-
trated from a number of non-Pama-Nyungan languages particularly in
Arnhem Land. In a majority of these northern languages the bound pro-
nouns are prefixed to the verb or to the auxiliary verb. In transitive
clauses the pronouns representing A and P are usually contiguous.

   In Maung (Goulburn Is. N.T., Capell and Hinch 1970:73-76) the S_1
forms for first and second singular are ŋa and an respectively, but
in a clause where first singular is A and second P or vice versa we
do not find these two morphemes. Instead for 1s → 2s (where → =
'acting on') we find gun and for 2s → 1s we find ŋan. ŋan is not
ŋa + an since the -n upon closer inspection turns out to be a marker
of P function for first and second person, i.e. it is an accusative
marker presumably reflecting *-N^{y}a. Maung exhibits a number of
principles in the formation of its bound pronoun complications.
Where A and P are both first or second person, the person of P only
is marked. This is true of the example just quoted. gu- is to be
glossed as second person in P function. Where A and P are third
person, P precedes A but if a first or second person actant is
involved that person precedes a third person. There are a number of
neutralisations, e.g. ŋanin or ŋa+ni+n consists of a first person
marker, or plural marker and -n, the accusative marker, but it is
used not only for 2 pl → 1 pl but also for 2 pl → 1s. Moreover,
there are a number of phonological constraints operating that force a
number of morphophonemic changes. The total effect of the person
hierarchy, suppletion, neutralisation, morphophonemic changes, and

the constraint on specifying the person of A in combinations involving
first and second person is to render the system synchronically
unanalysable. The only reasonable synchronic analysis is to assume
that a speaker of a language like this learns off by heart the finite
set of forms involved. On the other hand an internal reconstruction
of the system can easily be carried out.

I will not present the Maung data in full. The reader is referred
to Capell and Hinch or to Blake 1977 where data in Maung, Yiwadja,
Rembarnga and Gunwinggu is displayed and partially analysed.

There is no doubt that in these languages and in some other
languages of Arnhem Land, e.g. Nunggubuyu and Ngandi, the represen-
tation of combinations of A and P by bound pronouns is quite opaque
and represents the end of a line of development from the exclusive
use of free forms via transparently abbreviated bound pronouns.

It is important for the overall argument presented here to note
that in most of the non-Pama-Nyungan languages one finds clear
reflexes of *-N^{y}a. Ngandi is an exception in that -ku has been
generalised at the expense of *-N^{y}a (see Heath forthcoming:section
3.6).

Some non-Pama-Nyungan languages are not opaque in the way I have
described above. In some of the Daly River languages, for example
(Tryon 1974), the S_1, A pronoun is prefixed to the auxiliary verb and
the P pronoun suffixed. Usually there is some fusion of the S_1, A
pronoun and the auxiliary and discrepancies between the shape of free
forms and their bound counterparts.

2.3.4. Summary

The evidence suggests that with few exceptions there has been a
development from having independent pronouns only to using obligatory
cross-referencing bound pronouns with free forms being used only for
emphasis. The languages lacking bound pronouns are almost all to be
found in a swath running from the Great Australian Bight in South
Australia to Cape York. This represents the most conservative area
typologically. This area is flanked, particularly to the east (most
especially in and near to New South Wales) by languages exhibiting
bound pronouns that show a clear relationship with the free forms.
Most of the Pama-Nyungan languages of Western Australia have a bound
pronoun system that is not clearly related to the system of free forms
especially in the first and second singular. The non-Pama-Nyungan
languages often have complicated systems of obligatory cross-
referencing bound pronouns, complicated in that there is no clear

relationship between the A and P bound forms and the S_1 bound forms
and between the free (S_1, A, P) forms. Where this relationship has
been obscured by morphophonemic constraints, hierarchical rules,
person or number neutralisation rules, etc., it is possible in every
reported case to demonstrate that an accusative system underlies the
irregularities.

3. SYNTAX

The presence of ergative morphology raises a number of interesting
syntactic questions. Since in an ergative system of marking it is P
that is identified with S_1 one wonders if P is identified with S_1 in
syntactic rules. One wonders if P is in some sense more closely tied
to the verb than A, the latter being a peripheral constituent like
the A in a passive construction. And one wonders if there is an
active/passive distinction in these ergative languages.

Because of lack of data it is not possible to pursue this question
in detail covering a wide number of languages. I will confine myself
to a few selected examples.

3.1. Walbiri

Walbiri (N.T.) a western Pama-Nyungan language illustrated in a
number of papers by Hale, seems not to be syntactically ergative
though it has a fully ergative case marking system operating with
both nouns and pronouns (see example 40). In fact Walbiri seems to
have rules that identify A with S_1 and rules that make no exclusive
identification of either A or P with S_1.

For example, in indirect commands it is S_1 and A that must be
supplied as covert constituents of the subordinate clause (Hale 1968:
36-37),

> 42. ŋarka-ṇa-ø ŋaru-ṇu   wanti-nʸtʸa-ku
>   *man-I-him tell*-past *fall*-gerund-complementiser
>   *I told a man to fall (duck down)*

> 43. ŋarka-ṇa-ø ŋaru-ṇu   wawiri   panti-ṇinʸtʸa-ku
>   *man-I-him tell*-past *kangaroo spear*-gerund-complementiser
>   *I told a man to spear a kangaroo*

Similarly with the following constructions, it is S_1 and A that must
be understood as covert constituents of the subordinate clause under
identity with the P of the main clause (Hale 1968, and p.c.).

44. ŋarka-ŋku waṇa   pantu-ṇu   paṇka-nʸtʸa-kura
     man-erg   snake spear-past *run*-gerund-complementiser
     The man speared the snake as it was moving quickly

45. ŋarka-ŋku waṇa   pantu-ṇu   kuḍa yaḷki-ṇinʸtʸa-kura
     man-erg   snake spear-past *child bite*-gerund-complementiser
     The man speared the snake as it was biting the child

Walbiri does not have anything like a passive construction. In
English rules for the well-formedness of complex sentences often
make reference to the notion of grammatical (i.e. derived or surface)
subject. The grammatical subject is S_1 or A in the unmarked case,
but it can embrace P if the passive construction is used. The
constructions illustrated above operate strictly with reference to S_1
and A, more particularly, with reference to the identity of S_1 and A
in the subordinate clause and P in the main clause. If one wants to
say something like *The man speared the kangaroo that was being
followed by the dogs* then another construction must be used,

46. ŋarka-ŋku wawiri   pantu-ṇu   kutʸa-lpa maliki-ḷi puṛa-tʸa
     man-erg   kangaroo spear-past comp-aux *dog*-erg *follow*-past
     *The man speared the kangaroo as it was being followed by
     the dogs*

This latter structure is exemplified in Hale 1976 (d) and he refers to
it as the 'adjoined relative clause'. It appears to be a construction
in which there might be no actant common to the main and subordinate
clauses (in which case it corresponds to English sentences of the type
X did Y while W did Z) or it might involve identity of reference
between any of the actants of the main clause and any of the actants
of the subordinate clause. Where there is this co-reference, the
co-referent noun phrase in one clause or the other is anaphorically
deleted or represented by a pronoun:

47. ŋatʸulu-ḷu-ṇa yankiri pantu-ṇu. kutʸa-lpa ŋapa ŋa-ṇu
     I-erg-I   emu   spear-past comp-aux *water drink*-past
     I speared the emu which was/while it was drinking water

48. yankiri-ḷi kutʸa-lpa ŋapa ŋa-ṇu.   ŋula-ṇa   pantu-ṇu
     emu-erg   comp-aux *water drink*-past *that-one-I* spear-past
     ŋatʸulu-ḷu
     I-erg
     The emu which was drinking water, that one I speared

This construction does not seem to be oriented either accusatively or ergatively.

3.2. Pitta-Pitta

In the non-future Pitta-Pitta (W.Q.) employs ergative and accusative marking for all nominals. In the future, a single form represents S_1 and A, while P is represented by a dative (-ku) or the accusative (-na). Roth (1897) records -ku, but the main informant consulted by Breen and myself uses -ku or na.

    49.   palku ŋu-wa-ka   kaṇṭa-ya-ŋu
           man   *he*-nom-deictic *go*-pres-*hither*
           The man comes

    50.   piṯi-ka   palku-lu ŋu-lu-ka   kulparri-na
           kill-past *man*-erg *he*-erg-deic *emu*-acc
           The man killed the emu

    51.   palku-ŋu ŋu-ŋu-ka   kaṇṭa-ø
           man-fut *he*-fut-deic *go*-fut
           The man will go

    52.   piṯi-ø   palku-ŋu ŋu-ŋu-ka   (ŋu-ku-ka)   kulparri-ku
           kill-fut *man*-fut *he*-fut-deic *he*-dat-deic *emu*-dat
           The man will kill the emu

These examples illustrate the system for marking S_1, A and P in the non-future and future. The word order is fairly flexible, but a preferred order is VS_1 and VAP, especially if the actants are represented by pronouns. The use of a third person pronoun cross-referencing S_1 and A is practically obligatory, and a third person pronoun cross-referencing P is employed occasionally (see bracketed item in 52 above) if P is definite.

Clearly the case marking system in the non-future is neutral rather than ergative or accusative, while in the future it is, at least in terms of identification of S_1 and A, an accusative system. It is not too surprising then to find that the syntax is neutral.

Consider for example the following sentences:

53.   mamakaya-ka ŋa-ṯu pIyawaḷI-ṉa ṯInpa-ma-ka-ṉa
      grab-past   *I-erg* *dog-acc*   *run-around*-past-acc
      I grabbed the dog { *as he* } *ran around*
                         { *who*   }

54.   mamakaya-ka ŋa-ṯu kaṯi-ṉa   piyawaḷi-lu ṯatᵞi-ka-ṉa(-)watᵞi
      grab-past   *I-erg* *meat-acc* *dog-erg*   *eat*-past-acc-*before*
      I grabbed the meat before the dog ate it

55.   mamakaya-ka ŋa-ṯu piyawaḷi-ṉa kaṯi-ṉa ṯatᵞi-ka-ṉa
      grab-past   *I-erg* *dog-acc*   *meat-acc* *eat*-past-acc
      I grabbed the dog { *as he* } *ate the meat*
                         { *who*   }

In each sentence an actant of the main clause is co-referent with an actant of the subordinate clause; more specifically P of the main clause is co-referent with S_1, P and A in 53, 54, 55 respectively. In a transformational model one would describe the formation of these sentences in terms of deletion of an actant from the subordinate clause under co-reference with an actant of the main clause. Note that no exclusive identification of S_1 with P or of S_1 or A with P is required; an identification of *any* actant in a major syntactic relation in the subordinate clause with P in the main clause makes for the formation of a well-formed sentence. This holds true for other constructions. In general the syntax seems to be neutral, identifying neither A nor P with S_1, the neutrality of the syntax reflecting the neutrality of the case marking.

3.3. Kalkatungu

    Kalkatungu (W.Q.) has a morphological system similar to that of Walbiri (nouns and free pronouns operate ergatively, but bound pronouns accusatively) but differs from it syntactically in that it does have a passive-like case-switching rule.
    Let us consider first of all constructions involving -nᵞin(~-tᵞin). -nᵞin occurs on the verb of subordinate clauses that translate English adverbial phrases and clauses of time (*while working, as he was patting the dog*) or relative clauses (*who was ...*). It seems to be a nominalising suffix to which noun case marking may be added; I refer to it as a part(iciple).

56. ŋa-ṯu ḻai-ṉa   piḻa-piḻa iŋka-tʸin
     I-erg hit-past *child*   go-participle
     I hit the child as he was walking along

57. ŋa-ṯu ḻai-ṉa   piḻa-piḻa kanḳari-i ṉita-i-nʸin
     I-erg hit-past *child*   knife-dat *steal*-a/p-part
     I hit the child for stealing the knife

58. ŋa-ṯu waṯiṉṯii-ṉa piḻa-piḻa ṯuku-yu itʸa-nʸin
     I-erg *carry*-past *child*   dog-erg *bite*-part
     I carried the child who got bitten by the dog

In 58 piḻa-piḻa represents the P of the main clause and the P of the
subordinate clause. In 57 piḻa-piḻa represents the P of the main
clause and the A of the subordinate clause. Note that in 57, the verb
is marked by a suffix -i, which I have glossed as a/p for anti-
passive. In the anti-passive construction A is marked by the
nominative and P by the dative. The term 'anti-passive' (see
Silverstein 1976) captures the analogy with passive constructions.
In both, the case relation occupying the nominative case form is
demoted to a more peripheral case slot and a case relation previously
occupying a non-nominative slot is promoted to the nominative slot.
This construction is used in Kalkatungu in -nʸin clauses, and in a
number of other types of subordinate clause, whenever the A of the
subordinate clause is co-referent with an actant of the main clause.
It can be considered a device to facilitate deletion, since the use
of this construction enables the case relations of anaphorically
deleted actants to be recovered. If one considers 57 then it might
seem that the anti-passive is a device for ensuring that only actants
in the nominative are deleted. Indeed it may well have been motivated
originally by such a consideration, but in 57, the case relations can
be determined from the case marking of the overt actant. If there
were no anti-passive in the language, then a nominative noun phrase
in the complement would indicate a deleted A. And of course it must
be remembered that many Australian languages work quite happily with-
out an anti-passive. The fact that there is a choice between the
unmarked construction and the anti-passive, means that a subordinate
clause with no overt actants can be uniquely interpreted, for
instance:

59. ŋa-ṯu ḻai-ṉa   piḻa-piḻa nanʸi-i-nʸin
     I-erg hit-past *child*   see-a/p-part
     I hit the child for looking

60. ŋa-ṯu ḻai-ṉa   piḷa-piḷa nanʸi-nʸin
     I-erg hit-past *child   see*-part
     I hit the child for being seen

Languages without the anti-passive either allow ambiguous structures
ranging over the two possibilities or they provide entirely separate
constructions for the two possibilities.

   Before going any further I should point out that the anti-passive
marker is permanently affixed (and therefore non-functional) to
independent verbs in Kalkatungu. This point is taken up again in
3.6.1.

   From a consideration of the -nʸin construction, Kalkatungu appears
to be a mirror image of English. S_1 and P are identified in the
unmarked construction (56, 58) and A is treated specially as it is in
the case marking. However, if we consider the favourite construction,
further complications arise. This construction, so termed because of
its high functional load and high frequency, is used principally to
express purpose and indirect commands, but also to provide complements
for noun phrases. It differs from the -nʸin construction principally
in that the subordinate clause contains at least one bound pronoun
suffixed to a particle which I will call the complementiser. A
typical purposive example would be,

61. iŋka-ṉa nʸini ucan-ku a-ni   aṉpa-i?
     go-past *you   wood*-dat comp-*you gather*-a/p
     Did you go to collect firewood?

-ni is a bound pronoun representing second person singular and it
co-references nʸini in the main clause. The -i on the verb is the
anti-passive marker. The case marking in the dependent clause is in
accordance with the anti-passive construction, -ni being the A and
appearing in the nominative, while ucan, which is the P, is marked by
the dative. Note however that the bound pronouns operate in an
accusative paradigm only. -ni represents S_1 and A and is opposed to
-kin the form for P.

   For the most part, only one actant can appear as a bound pronoun
in the complement clause of the favourite construction. The actant
to be chosen for representation as a bound pronoun in the case of a
transitive complement is determined by a person hierarchy rule, first
person taking precedence over second and third, and second taking
precedence over third. If both actants are third person, A takes
precedence over P. If one actant is first singular and the other

third plural, then both may appear as bound pronouns suffixed to the complementiser.

For example, a sentence such as *He came here to hit me* would be translated into Kalkatungu as

62. n̪aun̪a iŋka-n̪a a-ŋi(-)l̪a[20]
    hither go-past comp-*me-hit*
    He came here to hit me

whereas *We went there to hit them* would be translated as

63. paun̪a iŋka-n̪a ŋata t̪ina-a   a-ti   l̪a-i
    thither go-past *we*   *they*-dat comp-*we hit*-a/p
    We went there to hit them

The anti-passive construction is used in the subordinate clause where A and only A is represented by a bound pronoun and where it co-references S_1 or P in the main clause. Thus it is used in 61 (S_1 = A) and 63 (S_1 = A) but not in 62 where the bound pronoun represents P. The following sentence illustrates its use where the A pronoun co-references P (P = A),

64. nʸini ŋkai-n̪a   ucan-ku a-ni   an̪pa-i?
    you   send-past *wood*-dat comp-*you gather*-a/p
    Did he send you to collect firewood?

So far everything appears to operate on an ergative principle, but since in the case where we are dealing with third person actants, it is A rather than P that must be represented by a bound pronoun in a transitive complement, A rather than P is being identified with S_1.

In sum, Kalkatungu appears to have:

(a) an active/passive-like distinction that involves identifying S_1 and P in the unmarked case;

(b) a principle that operates on the basis of grammatical subject. In the -nʸin and certain other constructions P of a main clause can be co-referent with S_1, P or A, but if with A, the anti-passive must be used (57);

(c) a principle that operates on the basis of an underlying subject (S_1 and P), viz. the principle that determines whether the anti-passive is to be used in the favourite construction and the 'lest' construction (not illustrated);

(d) a principle that identifies S_1 and A, viz. the principle that requires that these actants be represented by bound pronouns in the

favourite construction and the 'lest' construction (subject to the person hierarchy).

3.4. Dyirbal

Dyirbal (NE.Q.), the only Australian language which has been described in any syntactic detail (Dixon 1972), appears to be ergatively oriented in its syntax.

In Dyirbal, nouns operate in an ergative paradigm and first and second person pronouns operate in an accusative paradigm. Dixon characterises the language as one in which the syntax operates consistently on an ergative principle, even though the morphological case marking is partly ergative and partly accusative (1972:128-130).

Dixon presents sentences such as (1972:130),

65. bayi yaṛa baninʸu   baŋgun dʸugumbiṛu balgan
    the   man come-past *the*-erg *woman*-erg *hit*-past
    The man came and was hit by the woman

66. bayi yaṛa baninʸu   bagun   dʸugumbilgu balgalŋanʸu
    the   man come-past *the*-dat *woman*-dat   *hit*-a/p-past
    The man came and hit the woman

In 65 a complex sentence is formed on the basis of the actant common to the two clauses (bayi yaṛa) being S_1 in the first clause and P (deleted or covert) in the second. In 66 a complex sentence is formed on the basis of the common actant being S_1 in the first clause and A in the second. Note however that in 66, an anti-passive construction must be used in which A is in the nominative (but deleted in our example) and P in the dative, with the verb being marked by the anti-passive marker -ŋay.

The general principle is that where A is co-referent with a major actant of another clause in the same sentence, the clause (or clauses) with a co-referent A must be anti-passivised (see Heath forthcoming a). Dyirbal is ergative in its syntax in that A is specially treated. It operates largely in terms of S_1 and P being treated as a grammatical subject with A being promoted to that syntactic slot under certain co-reference conditions. One could compare English sentences such as *I persuaded him to go*, *I persuaded him to eat the cake* and *I persuaded him to be fumigated by a health officer*. Where S_1 and A in the infinitival complement are co-referential with the 'persuadee', the unmarked active construction is used in the complement. Where P is

co-referent with the 'persuadee', the passive must be used in the
complement to promote P to the grammatical subject position.

3.5 Summary

As stated at the beginning of the syntax section of this paper, it
is not possible to say much about the syntax of Australian languages
in general. The type represented by Walbiri, i.e. a type in which
there is nothing akin to a passive rule and where there are syntactic
rules based on S_1 and A and neutral syntactic rules is probably wide-
spread. Languages with an anti-passive are not too widespread.
Yidin[y], Djaabugay and Warungu, three languages whose territory was
contiguous with or close to Dyirbal territory exhibit anti-passive
constructions though they are not closely related to Dyirbal. Anti-
passive constructions also appear to be a feature of Bandjalang
(N.S.W., Q., Crowley p.c.), Yalarnnga (Q., author's and Breen's field
notes), Kala Lagau Langgus (Torres Strait Q., Bani and Klokeid 1976),
and probably, or at least possibly, Guugu-Yalandji (Q., R. Hershberger
1964). Pitta-Pitta does have an anti-passive in independent sentences,
see 3.6.2.

The accusative Pama-Nyungan languages both Lardil and the other
'Gulf' accusative languages and Ngarluma and the other accusative
languages of NW. Western Australia have passive constructions.
Ngarinyin and some other non-Pama-Nyungan langauges of the Kimberleys
also have a passive construction.

3.6. Some Suggested Historical Developments

It is interesting to speculate whether the ergative elements
represent an older layer in these systems or whether the accusative
elements represent an older layer or whether there is movement in
both directions, from ergative to accusative, or from accusative to
ergative. There is also the possibility that there is movement to or
from a neutrally oriented system.

In two cases it is possible to detect the direction of change. In
Kalkatungu the anti-passive has been generalised in non-dependent
clauses and in Pitta-Pitta it has been generalised in at least one
type of dependent clause.

3.6.1. Kalkatungu

In Kalkatungu the -i that features in examples such as 57, 59, 61,
63 and 64 as an anti-passive marker occurs regularly on non-dependent
verbs in the present and past tense.

67. mirampa ŋa-t̪u l̪ai-n̪a   (stem l̪a-)
     possum   *I*-erg *kill*-past
     I killed the possum

Kalkatungu does employ a construction in which A appears in the
nominative and P in the dative. This is used to indicate uncompleted
activity (see 10) and it is also used where there is a predictable
indefinite P and in *drink water, cook tucker,* etc. However, -i
appears regularly on the verb in this construction also. Since -i
does not have any function with independent verbs, I have interpreted
the anti-passive function with dependent verbs as representing the
older usage. There is one very plausible reason why the anti-passive
marker might have been generalised. In the nature of things -i will
appear on over ninety per cent of dependent verb tokens. One often
has occasion to use patterns such as: X went to do such-and-such,
X told Y to do such-and-such, but rarely does one need to use
patterns such as: X went to be verbed by Y, or X told Y to be verbed by
Z. Remember that the anti-passive is used when A in a dependent clause
co-references S_1 or P in a governing clause. Under these circumstances
the verb forms in -i must have been very common and so it is not too
surprising that they were generalised to main verbs as the regular
form. This may not be a correct explanation, it may be that there
was a usage of the anti-passive in main clauses and that the -i was
generalised from this construction. It is to be expected that -i
would have been used in the construction in which A is marked by the
nominative and P by the dative. One way or another the unmotivated
use of -i with independent verbs must represent a relative innovation.

     It is worth noting in passing that proto-Kalkatungu *l developed
to *y so that -yi or -i[21] can plausibly be derived from *-li, -li being
a common reflexive or reflexive/reciprocal marker in Pama-Nyungan
languages and the anti-passive in the adjacent language Yalarnnga and
in Pitta-Pitta, immediately to the south of Yalarnnga.

     Kalkatungu uses some dependent verb forms as independent verbs.
For example, -nʸtʸaya the infinitive or purposive form, can occur as
a dependent verb as in

68. ŋata ŋain̪i iŋka tʸipulʸu-u mani-i-nʸtʸaya
     we   later go   duck-dat *get*-a/p-purposive
     We will go later to get ducks

or as an independent verb as in

69. mirampa caa ŋa-ṯu waku ḻa-nᵞtᵞaya
     *possum   here I-erg skin hit-*future
     I'm going to skin the possum

When it is used as a dependent verb the anti-passive principle operates,
however when it is used as an independent verb, there is no alter-
nation between passive and unmarked forms. The unmarked form is the
only form that is used. This would be the form required if it were
dependent with its A co-referencing a governing A.

The favourite construction is also used as a non-dependent verb
form and it is always the non-anti-passive form that is employed,

70. ŋata-i kuṯu a-ti   itᵞa
     *we-*erg *egg* (comp)^{22}-*we eat*
     We will eat the eggs

In sum there is no choice between having -i or not having it in
independent clauses. Where dependent verb forms are used as
independent verbs, -i is not used. With ordinary independent verbs,
-i is almost always used.^{23}
The construction illustrated in 70 is interesting that the bound
pronouns assume a cross-referencing rather than a co-referencing
potential.

3.6.2. Pitta-Pitta

In Pitta-Pitta -li is suffixed to the verb to indicate activity
that is potentially rather than actually directed towards P. In the
'-li construction' A is in the nominative and P is marked by -ku,
which I will gloss as dative, or alternatively by the accusative -ṉa.
-ku, besides marking P in the '-li construction' marks the complement
of certain verbs such as yaṯa- (*to like*) and manuwanᵞtᵞi- (*to be wild
with*). There is also a suffix -ŋa covering the possessive and
purposive functions.

In Roth (1897) -li is illustrated as providing a means of express-
ing a transitive verb in the absolute sense, i.e. with no P (op. cit.
23, author's phonemicisation),

71. ṯatᵞi-li-ya ŋanᵞtᵞa
     *eat-*a/p-pres *I*
     '*I am at-eating, at dinner, etc.*'

This usage is confirmed by the best available informant, but she also
produces sentences such as:

72. piṯi-li-ya   ŋanʸtʸa in-ku
     hit-a/p-pres I   you-dat
     'I feel like to hit you'

73. patʸa-li-ka   ṉuwaka in-ku
     bite-a/p-past he   you-dative
     He was very wild with you

In purposive complement clauses, the verb is always suffixed by -li
and then further suffixed by -ŋa the suffix used to express purpose
(or possession) with nouns. Consider the following sentences,

74. kaṉṯa-ka-yaŋu   ṉanpaka ṯinpa-ma-li-ŋa
     go-past-hither she   run-around-li-purpose
     She came to have a run around

75. kaṉṯa-ka-yaŋu   ṉanpaka ṉupu-ṉa piṯi-li-ŋa
     go-past-hither she   spouse   hit-li-purpose
     She came to hit her spouse

76. kaṉṯa-ka-yaŋu   ṉanpaka ṉupu-wara-lu   piṯi-li-ŋa
     go-past-hither she   spouse-her-erg hit-li-purpose
     She came so her spouse could hit her

Note in particular that -li occurs in 75 where we would expect a
syntactically motivated anti-passive in a language with such a feature,
and also in 74 and 76 where we would not expect an anti-passive.
Since the use of -li is significant with non-dependent verbs but not
significant with dependent verbs, it seems that the usage with non-
dependent verbs is older. If we note also that the form involved is
-li, which is the reflexive-reciprocal marker in a number of Pama-
Nyungan languages, and if we consider that the anti-passive marker is
the same as the reflexive-reciprocal in a number of Australian
languages, then there is reason to believe that here we are dealing
with an anti-passive marker that has been generalised. As we observed
above in the case of Kalkatungu a syntactically motivated anti-passive
is in the nature of things likely to be used in an overwhelmingly
large number of subordinate clause tokens. It would be subject to
considerable pressure from each new generation of language learners
to extend it at least to all transitive verb tokens in dependent
clauses.
     The anti-passive marker in Yalarnnga, the language immediately to
the north of Pitta-Pitta, is -li. The present reflexive-reciprocal

marker in Pitta-Pitta is maⅼi, doubtless from ma+li, ma being a common
'verb morpheme' in Australian languages, appearing as a transitiviser
in some languages and as an intransitiviser in others. The -li of
Pitta-Pitta, the -li of Yalarnnga, the -yi (< -li) of Kalkatungu and
the reflexive-reciprocal -li of a number of other Pama-Nyungan languages
undoubtedly reflect a proto-form *-li, though that does not rule out
the possibility of its being borrowed from language to language in
one function or another. It is likely that the reflexive and/or
reciprocal function antedates the anti-passive function. It is
interesting to compare the development of passives in Europe from
reflexive constructions, in Latin for example, and independently in
Romance and Scandinavian.

4. GENERAL SUMMARY

   If one accepts the series of suggestions put forward in this paper,
and it must be remembered that some of them are rather speculative
and intuitive and not based on rigorous reconstruction, then the
following picture emerges.
   First of all we have a language in which nouns operate in an
ergative paradigm and pronouns in an accusative paradigm. Then cross-
referencing bound pronouns are introduced and finally the case marking
for the major syntactic functions is lost in favour of the bound
pronouns.

	Nouns	Pronouns	Bound Pronouns
Stage 1	ergative	accusative	
Stage 2	ergative	accusative	accusative
Stage 3			accusative

A fourth stage could be added in which the bound pronouns become
unanalysable.
   The first stage is represented by languages in a swath running
from the Bight to the Gulf and probably embracing the area from the
Bight to Perth (see map). The next stage is represented by the
eastern Pama-Nyungan languages that have bound pronouns. A slightly
more advanced stage is represented by the western Pama-Nyungan
languages that have bound pronouns. The most advanced stage is
represented by the non-Pama-Nyungan languages, most of which have lost
their case marking.
   The fact that the cross-referencing pronouns operate in an
accusative paradigm is taken to be simply a reflection of the fact
that the bound pronouns are derived from free pronouns which operated

in an accusative paradigm. The free pronouns that operate in an
ergative paradigm are interpreted as having developed an ergative
paradigm after the bound pronouns were derived.

Anti-passive constructions, which signify a type of ergative
syntactic system, i.e. one that is ergative in the sense that English
is accusative, are concentrated among the languages lacking bound
pronouns. This may be because languages with co-referencing bound
pronouns would place a smaller functional load on the ergative/anti-
passive distinction and render the anti-passive more liable to succomb
to the pressures described with reference to Kalkatungu and Pitta-Pitta
(3.6.1, 3.6.2).

It is interesting to note that Pama-Nyungan, the family that covers
most of the continent, appears to be the most conservative family.
Naturally since this family covers such a vast area compared to the
other families in the north, it represents the area of lowest
diversification. This means that the area of lowest diversity is
typologically the most conservative. It has been suggested that
Pama-Nyungan spread over its present area comparatively recently.
Glottochronology, for what it is worth, yields a time depth of 5,000
years (Wurm 1970:18). A comparison of morpho-syntactic diversification
in Pama-Nyungan and Indo-European suggests that if Indo-European
provides any kind of measuring stick, then a figure of 5,000 or a
little less is about right for Pama-Nyungan. One way or another
Pama-Nyungan must be of an age considerably less than the period of
time Man has been in Australia (+40,000 years) and certainly less than
proto-non-Pama-Nyungan. Thus we are left with a mystery. If Pama-
Nyungan was part of a language pattern showing the diversity of
present day non-Pama-Nyungan less the effects of 5,000 years, how is
it that this relatively conservative member happened to be the one
that was spread? Or did it undergo some kind of pidginisation in the
course of its spreading, which presumably must have been at the
expense of other languages? Or again, is this line of thought quite
wrong? Does Pama-Nyungan represent the pattern that was once
ubiquitous, and is it that the non-Pama-Nyungan languages for reasons
unknown have been subject to relatively accelerated typological change?

NOTES

1. I represent the ergative as being basically -lu on the suggested reconstruction of Hale's (1976d:414). See also 2.1.1.

2. I represent the accusative as deriving from - N^{y}a on the suggestion of Dixon's (1970) that n and ny derive from a single proto-laminal.

3. I describe verbs which require only S$_1$ as 'intransitive' and any actant that occurs optionally as in English *He waits for her* is described as an adjunct. Some verbs take two actants but differ from transitive verbs in that they take the same case marking as an intransitive verb with S$_1$ and an adjunct. I describe these as 'semi-transitive with S$_1$ and a complement'.

4. The functions listed here are categorised semantically. In writing a general paper it is not possible to determine which distinctions are made syntactically. Where the term DATIVE is used it refers broadly to these functions lumped together.

5. Examples from Kalkatungu, Yalarnnga, Wangka-Manha or Pitta-Pitta, unless otherwise ascribed, are from my field notes.

6. The extra -i which appears unglossed on puni and on nti in examples 16, 17 and 18 appears on virtually all independent transitive verbs in Kalkatungu. It is discussed in 3.6.1. It appears to be an original anti-passive marker that has been generalised. In dependent clauses, it functions as an anti-passive and hence may appear or not in accordance with the conditions described in 3.3.

7. An example of the -wa ~ -pa alternation can be observed in examples 73 and 74 where the Pitta-Pitta forms for *he* and *she* occur

he	n̲u-wa-ka
she	n̲an-pa-ka

-ka is the unmarked member of a set of three deictic suffixes. These forms are left unanalysed in the glosses of Pitta-Pitta sentences for the sake of simplicity.

8. Hale labels his hypothesis as 'highly speculative' and indeed there are a number of points that still require explanation. In commenting

on this section of the draft, Hale drew my attention to the fact that
in Nyangumarda (W.A.), -t^{y}u is used with consonant stems. The same
is true of Yulbaridja (W.A.). In Kalkatungu (Q.), -ʈu is used after
vowel stems. The origin of these variants is one matter still
requiring explanation.

9.   -kuɽ etc. derive historically from -*kuru (Hale p.c.).

10.   The 'surface instransitive' pattern is used in Baagandji (N.S.W.,
Luise Hercus p.c.) and in Pitjantjatjara (S.A., W.A., Platt 1976).

11.   Yanyula (N.T.) has ergative forms that reflect -*lu (Hale p.c.
See also Kirton 1977).

12.   Heath (forthcoming b:3.3) suggests that in Mara an old masculine
noun-class prefix -ŋa has been specialised as an ergative-instrumental.
Mara is a non-Pama-Nyungan language of the Northern Territory
(see map).

13.   The third person pronouns in Pitta-Pitta obligatorily incorporate
a deictic marker. Third person pronouns incorporating the unmarked
deictic -ka are very commonly used with S_1 and A and sometimes with P
if P is definite.

14.   A number of Queensland languages exhibit a masculine (strictly:
non feminine) stem N^{y}u- ~ N^{y}i and a feminine stem N^{y}an-. More
commonly N^{y}u- occurs for third person in general. The vowel
alternation of ṉi-, ṉu- is difficult to explain. On the evidence here
it looks like vowel harmony i > u /_C₀u or assimilation to laminal
consonants (u > i), perhaps dependent on the presence of two laminals,
*N^{y}iya, *N^{y}iN^{y}a.
     However, over a range of languages we find forms such as ṉu, n^{y}u,
ṉi, n^{y}i, ṇi, ṇu, ni, nu as third person pronoun roots, as class
markers in classifying languages and as ergative markers. Some
rigorous reconstruction is required to demonstrate if some or all of
them are cognate. Vowel harmony involving the high vowels is common
in Australia and independently of the forms under discussion there are
cognates involving apical:laminal correspondences.

15.   See Comrie 1976 from which some of the examples are taken.

16. -*ku is probably the original form. There are some languages
that have -ku with both C and V stems.

17. Dixon uses the voiced symbols: b, d, etc.

18. The pronoun paradigms for Warluwara and Yanyula respectively are
as follows:

		Warluwara (Breen 1971:182)	Yanyula (Kirton 1964:140)
Sing.	1	ŋaṇa	ŋaṇa
	2	yipa	yenta
	3	yiwa	m. yiwa, yiyo, yila
			f. anta
Dual	1 inc.	ŋali	ŋali
	ex.	ŋayara	ŋaṯara
	2	yipala	yimpala
	3	wula	wola
Pl.	1 inc.	ŋapala	ŋampala
	ex.	ŋanu	ŋanu
	2	wuru	yiru
	3	yanu	alo, alowa

In both languages, ŋaṇa is dimorphemic:

	Warluwara	Yanyula
Nom.	ŋaṇa	ŋaṇa
Dat.	ŋaṯa	ŋaṯa
Acc.	ŋaṇa	

In Yanyula, -ŋa serves as the bound form for first person. The
similarities between Warluwara and Yanyula extend to the pronoun
inflections:

First Dual Inclusive

	Warluwara	Yanyula
Nom.	ŋali	ŋali
Dat.	ŋaliŋa	ŋaliŋa
All.	ŋalikaḷu	ŋaliwalu

19.   Hale (p.c.) points out that in Ngarluma, for instance, there
certainly seems to have been a development from *ŋayku to ŋatʸu since
the accusative/dative of the first singular is ŋatʸu while -ku is the
accusative/dative suffix for polysyllabics and consonant-final stems.

20.   Kalkatungu does not allow words of one syllable (or one mora).
ḻa, the root for *hit* or *kill* is monosyllabic. When it is not suffixed,
it must be augmented to ḻaa [ḻa:]. However, when it follows a
combination of complementiser and bound pronoun, it may be cliticised
to the combination. a-ŋi ḻa may be pronounced [aŋi ḻá:] or [áŋiḻa].
The bracketed hyphen in the notation indicates optional cliticisation.

21.   The anti-passive suffix can be written as -i or -yi according to
one's views of phonology. Morphophonemically it is -yi however one
writes it and I suggest that this -y- is a reflex of *l rather than *y.

22.   Since a does not function as a complementiser here, it needs to
be glossed as auxiliary particle or something similar.

23.   One exception would be interrogative sentences. In these -i is
often omitted, e.g.

                    ṉaka-ti   ŋin-ti   ḻaa
                    what-loc *you*-erg *hit*
                    What did you hit him for?

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