

# THE HISTORY OF AUSTRALIAN LANGUAGES: A FIRST APPROACH

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## 1. INTRODUCTION

### 1.1. Preliminary Note

The situation regarding the origin and history of language in Australia is closely linked with the origin and history of the Aboriginal people themselves, and in any detail it is probably just as insoluble. It may indeed be more so, because language does not leave the same sort of tangible traces as cultural objects and skeletal remains. The purpose of this paper is to make suggestions as to what happened linguistically during the forty thousand or so years that the Aborigines have been in Australia. This period is much longer than the known history of human speech anywhere in the world. If linguistics as a historical science depends on documentation, then the situation for Australia is serious because there is no documentation prior to the arrival of white men, and much of what there is from the earlier stages of colonisation is very poor and quite useless for historical purposes.

A paragraph of O'Grady's contribution to this volume probably summarises truly the situation regarding the linguistic problem. There he says: 'The linguistic situation in Australia 15,000 years ago can presumably in no way ever be recovered. Whether there were fifty languages spoken at that time or five hundred, none of us living can ever know.' There may have been five hundred languages, more or less, spoken when Captain Cook first caught sight of the continent. Many have since disappeared, and hardly any of them was recorded before they disappeared, at least in a way that would satisfy the modern linguist. One thing, however, is certain: there was great variety among them. Do they represent one family or more? That is the question which this paper seeks to investigate, although only in mere

outline. The answer would appear to be 'No'. The question then remains: 'What are the relations between the languages?' That is the purpose of this paper: to give such an answer as the known facts indicate.

Quite early in European acquaintance with Australian languages it became clear that there was much diversity among them. Moorhouse in his study of Murundi, published in 1846, began to point out common structural elements among them, including ten common points: (1) suffixes or particles added to the terminal parts of words to express relations; (2) dual forms of substantives, adjectives and pronouns; (3) limited terms - only five - for time, distance and number; (4) no sibilant consonants; (5) no articles; (6) no auxiliary verb - by which he meant the verb 'to be'; (7) no relative pronouns; (8) no prepositions; (9) no distinctions of gender; (10) no distinct forms of the verb to express the passive voice. Subsequent study has disproved some of these points, such as the absence of gender, but the bulk of them are correct. The typological study of Australian languages thus began quite early after contact. Although wider study modified Moorhouse's list, for 1846 it was an unexpectedly good attempt to relate the languages then known - those from 'Swan River, Port Lincoln, Adelaide, Murray River, Encounter Bay, and New South Wales (Awaba)'.

During the remainder of the nineteenth century, a number of views were put forward as to the origin of the Australian languages, always on the assumption that, in spite of the obviously great variations between them, they did form a unity. These views were briefly but adequately summarised by S.H. Ray (Ray 1907a:512-16). There are four of them: (1) the African theory; (2) the Andaman theory; (3) the Dravidian theory; and (4) the Papuo-Dravidian-Malay theory. There is no longer any value in outlining these theories except for antiquarian purposes. Each quite unscientifically compared a few features, either of vocabulary, structure or typology, but produced no evidence of regular morphological correspondence. Typological resemblances between the prefixing languages of the Northern Territory and Northern Kimberley and those of the Bantu languages of Africa were pointed out by Capell (Capell 1951) but he did not suggest that there was any genetic connection. After all the discussions, the Australian languages still stand apart as a separate family, not connected, it would seem, with any other, unless New Guinea has anything to offer, and this has not been shown. There are extraordinarily close structural features and occasional morphemic agreements between the

Northern Kimberley languages and those of Burushaski of North-west India, but again, apparently nothing which can be built on.

Quite apart from the usual technical questions of what constitutes a relationship between languages, there is a problem peculiar to Australia, which was raised by Dixon (Dixon 1970a:653ff.) and elaborated by Wurm (Wurm 1970:9ff.). Both authors have shown why a special criterion of judgement needs to be raised for Australian languages. This criterion modifies the term 'language family' to 'family-like languages', and introduces the term 'phylum-like languages' in place of 'phylum'. Dixon discussed special difficulties in regard to tribal 'splits', and this must be taken as the background thinking in the present consideration. Suggestions made by Elkin (Elkin 1970) must also be taken into account.

Dixon's axioms are best summed up in the present setting. In general, the relationship between languages is to be sought along the established lines of historical comparative linguistics. However, where, as in Australia, there is no diachronic evidence, it seems necessary, in part at least, to follow other principles. What suggests the original unity of Australian languages is their remarkable agreement in phonology - of which more later - and a certain amount of agreement in structure and vocabulary. The last factor, however, varies immensely even over short distances, whereas words can be compared from one side of the continent to the other, almost like the remains from a lexical bomb explosion.

Vocabulary always supplies certain dangers, and in tracing its evolution there is always the danger of jumping to false conclusions because of 'obvious' *resemblances*. It is especially necessary to guard against this when material is insufficient, diachronic information is absent and time depths are great. By way of illustration, one comparison that first tempted the writer is worth mentioning. Certain linguistic groupings in north-eastern Arnhem Land are known as *mada* (R.M. and C.H. Berndt 1964/8:63 and *passim*). In south-western Australia two moieties existed, named *Manatjmaṭ* and *Waṭangmaṭ*. The suffix *-maṭ* naturally tempted identification with *mada*. In north-eastern Arnhem Land (NEAL) *mada* is *tongue* both as organ and as language. This is one of the rare failures of CA \**dalanj* to penetrate, though it could, of course, have been lost in modern times through word taboo. But in south-western Australia, *maṭ* is *leg, foot* (in place of CA \**dinaŋ*), extended to *way, path* as a totemic mark. Hence the two names are different and, semantically, the south-western word corresponds better to NEAL *mala, group, clan*. Unless a correspondence could be

established between south-western  $\text{t}$  and NEAL 1, there could be no connection; the fact that this error was not made is due to timely enquiry and the guidance of Mr W.H. Douglas.

This is a type of danger that will always be particularly close at hand in the pursuit of the linguistic history of Australia. Of course, the ideal way to trace linguistic history is by pair-by-pair comparison of languages. Over the whole of Australia this method presents enormous difficulties, and either the whole effort to trace the history must be abandoned or risks must be taken.

There is another feature in Australia which also makes the application of the procedures of Indo-European linguistics difficult and, in some features, impossible. This is the fact that relationships among languages depend far more on structure than on vocabulary, for reasons which can best be set out in the words of Dixon and Crowley (1979):

'If the speech of two tribes is so similar that it is most economic to write a single overall grammar, with notes on grammatical differences then we may say that the two tribes speak dialects of a single language. If, on the other hand, the grammars differ so much that it seems simpler to write two separate descriptions, then we say that there are two different languages involved.

'It has been shown that the methods of lexicostatistics (which assume a very low rate of borrowing in the case of 'core' vocabulary) do not apply in Australia; Australian languages appear to borrow all types of words with equal facility. If two rather different languages come into contiguity, they will borrow back and forth until the common vocabulary makes up about 50% (in practice, say 40-60%) of each other's total vocabulary. If one tribe splits into two new tribes, each will taboo and replace words independently of the other, and the percentage of common vocabulary will steadily drop, until it reaches the 50% 'equilibrium' level. We assume that the considerations also apply to Tasmania....

'The only sure criterion for telling whether two tribal 'dialects' do belong to one language is morphological and syntactic similarity. It is, however, possible to draw some tentative inferences concerning language groupings from consideration of percentages of common vocabulary between two dialects: (1) If two contiguous dialects have more than 60% vocabulary in common, they are likely to be genetically closely related. In these cases the grammars of the two dialects will



be very similar.<sup>1</sup> (2) If two contiguous dialects have less than about 40% vocabulary in common, then it is probable that they are not closely related genetically, but are dialects that have recently come into contiguity and are currently building up their common vocabulary by mutual borrowing. We would in this case expect the grammars of the two dialects to be markedly different. (3) If two non-contiguous dialects have more than 40% vocabulary in common (a smaller figure would be significant if they were separated by a *number* of other dialects), then they are likely to be genetically closely related. Again, we should expect their grammars to be rather similar.

'It should be noted that, in all these cases, lexical comparison can only supply hypotheses of relationship, which must then be checked by detailed grammatical comparison. We cannot make any firm inference concerning dialect relationships from lexical data alone.'

## 1.2. Characteristics of the Languages

The modern Australian languages have the following characteristics:

1. A common phonemic basis. In passing it is only necessary to remark that this feature can hardly be explained from any idea except that of a common origin. There is just the possibility that it may result from a sort of common denominator reached by speakers of originally divergent languages, but this is unlikely. In the field of Amerindian linguistics, Mary Haas has demonstrated the possibilities of such a 'long term' derivation of languages (Haas 1969).

2. Structurally the morphologies are of two chief types: (i) suffixation only, and (ii) prefixation, with retention of suffixes for some features. This dichotomy is noticeable chiefly in the verbal systems. Prefixing languages mark subject and usually object pronouns by prefix, but tense, mood and voice by suffixes. In this group are included the noun classing languages and most of these use prefixes to mark the class of the noun; if number is marked at all, it may be done by prefix or suffixes according to the language.<sup>2</sup> There is also another

<sup>1</sup>In Australia itself this does not necessarily hold. There are several examples of neighbouring languages closely alike in vocabulary, but one of them has noun classes, with the concomitant grammatical markers, while the other does not. In Arnhem Land, Jiwadja-Mawng, Jilngali-Nungali, Ridarngu-Ngandi are three sets of such languages.  
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<sup>2</sup>Reference should be made to the paper on noun classification in Australia, in this volume.

kind of subgrouping possible - that between languages which use auxiliary verbs and those which mark all the features otherwise supplied through auxiliaries by means of the direct verbal stem inflection or the use of adjuncts to the verb. The classification of verbs in Australian languages is discussed in another paper in this volume. The two subgroupings cross each other, and each was presumably developed within the continent rather than brought in by different movements of peoples.

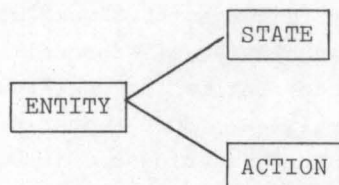
3. Syntactic arrangements are not critical for Australian language subgrouping. From a primitive freedom of arrangement the tendency has been towards fixation and, especially, to a Subject-Object-Verb (SOV) structure.

4. Vocabulary varies widely from language to language. There are certain words which appear to be continent-wide. One group of these has been classed as CA. Others are now appearing in various regions - regional vocabularies, such as those of Dampier Land - and some of these are found in far separated areas of the continent, such as Kimberley-Arnhem Land and western Victoria. These seem to belong to an EA stratum and to have been scattered by later movements of CA speakers: more will be said of this in the discussion of vocabulary later in this paper. Difficulties in tracing vocabulary in Australia were discussed in the previous sections; another arises from word taboo, by which words resembling names of the dead are avoided - at least one instance of avoidance of the pronoun for *me* has been discovered operating since the early 1950s (O'Grady and Voegelin 1966:142). The fact that there is no definite system for replacing such lost words makes linguistic development harder to trace. There are also kinship vocabularies, such as the commonly-called 'Mother-in-law' vocabulary; in the past also there were secret languages used during the initiation period, and there are still song languages which are far from fully known or analysed.

Within the feature of structure, two important items need to be contrasted. Some languages do not mark the subject of a transitive verb but they do mark the object, especially if it is a pronoun. Other languages leave the object unmarked, but mark the transitive subject by a suffix, producing what is usually called the 'ergative' case. These languages are called 'ergative languages', and they embrace the vast majority of Australian languages. The 'nominative' or 'non-ergative' languages occupy a region which stretches along the north coast of Western Australia, through the Northern Kimberley districts, over most of Arnhem Land, and the islands in the Gulf of

Carpentaria. It has usually been thought that ergativity is a mark of the CA languages, borrowed into the other type languages thus reducing their number greatly. This proposition now seems somewhat unsatisfactory, if only because ergativity is not a feature that is likely to tempt borrowing: it means the complete reconstruction of the verbal system of a language, including the abolition of a passive voice. The subject will be discussed below in 4.1.

Another type of classification used by the present writer (Capell 1965) is the one he has called '*A Typology of Concept Domination*'. As applied to Australia, this has been outlined by Wurm (1971:746ff.). It is based on entire utterance pattern. Instead of breaking down the utterance into two sections under the names of subject and predicate, it is looked upon from the viewpoint of deep structure. Here it is possible to think of a linguistic entity as consisting of something spoken about - its condition or nature - and some state or activity in which it is involved. Thus:



Deep structure (DS) may ultimately be no more complicated than this, which is a functional sentence perspective (FSP). Expansion of each rectangle produces surface structures (SS) which vary from language to language according to the kind and nature of the expansion. It is at this stage that languages actualise DS in different ways, placing the emphasis on one rectangle or the other. The ways in which these different emphases are placed then determine the nature of the language. The following are the three obvious ways:

(a) Some languages develop the S/A rectangles, leaving E relatively undetermined. Such languages may be regarded as 'event-dominated' and the process is then 'event domination' (ED).

(b) Some languages develop the E rectangle and leave the S/A rectangle largely undeveloped. Such languages are 'object-dominated' and the process is called 'object domination' (OD).

(c) Some languages develop all or most of the implications of each rectangle more or less equally, and such languages are 'doubly dominated'. This process is called 'double domination' (DD).

In the (a) group, state/action becomes refined in terms of voice, aspect, mood, tense, etc. though no precise order of historical development can be laid down. In fact, languages may change group in the course of their history.

In the (b) group, the 'entity' becomes defined progressively in terms of distinctions such as animate-inanimate, masculine-feminine-neuter, noun classification. Again no logical or historical order of development can be laid down: languages differ.

The formal interaction of part with part, commonly known as 'concord', is an attempt to classify the role of each part of the utterance - what refers to what within it - and again, languages differ as to the demands they make on the formal distinction of such roles. Concord may have wide effects not only on the morphological level but also on the discourse level, and may reach any degree of complexity or explicitness on any one of these, using the phonological level as the instrument by which the end is brought about.

(d) Moreover, there are languages that make only the minimum differentiation necessary for clarity of expression on both the E and the S/A sides of the utterance: English is one such language, and here 'domination' is almost neutralised. Such a process can be called 'neutral domination' (ND) and it is evidenced in Chinese and other 'isolating' languages.

All four types of language are found in Australia, and all the evidence to date suggests that there has been a kind of ascending complication from ND to DD in this continent. The following Table summarises areas in which each type of domination obtains:

#### A. NEUTRAL DOMINATION

No elaboration of morphological features; no noun classes; no indication of person or number in verbs; on the level of syntax, seek development of subordinate clauses. Type languages: Gadhing, Galgadungu, and the Wik- and Gugu- languages as a whole (with some individual modification of degree).

#### B. EVENT DOMINATION

The chief elaboration is in the verb, where tense forms may be numerous and pronominalisation begins to appear. There are numerous subtypes of this group which may be set out as follows:

- B. 1           Tense and number are indicated in the verb but person is not marked within the tense. Type language: Aranda.

- B. 11 Person is marked in addition to tense and number. Type languages: Ngunawal (NSW), Woywurung (Victoria).
- B. 111 Person markers used with verbs are also used with other categories, chiefly as possessives with nouns. Type languages occur in Victoria, but there are also influences from B. v.
- B. 1v Subject and object pronouns are incorporated into the verb complex. Type language: Wardaman.
- B. v Languages are rather heavily pronominalised; their chief characteristic is the transference of verb suffixes of person and number (subject and object) to the head word of the clause. Subdivisions within B. v are:
- B. v (a) Pronoun subjects and objects are free forms but syntactically conjoined with each other. Type language: Narrinjeri (Yaralde).
- B. v (b) Transfer of subject and object suffixes takes place regularly. Type language: Bidjandjadjara. There may also be sentence medial as well as sentence final forms within the verbs.
- B. v (c) Transfer is made only if the tense is non-past, but sentence medial and sentence final forms occur. Type language: Waljbiri.
- B. v (d) Catalytic particles are used to carry the markers instead of their being transferred to the end of the clause. Type language: Mudbura.

### C. OBJECT DOMINATION

There is more elaboration of nouns than in Groups A or B. Noun classes may occur, leading finally to class forms within the verb as well as within the noun phrase. Subgroups are:

- C. 1 Nominal systems are more highly developed than verbal systems; neither is morphologically complex. Type language: Diyari (Dieri).

- C. ii Further object domination is exhibited in nouns and pronouns. Type language: Gubabwiyngu.
- C. iii Noun classes are usually two only, with object incorporation (pronoun) in the verb. Type language: Gidja.

#### D. DOUBLE DOMINATION

Noun classes are present in most of these languages, and they are marked also within the verb complex. They are mostly prefixing languages. The subgroups are:

- D. i Noun classes are present, marked by suffixes, and there is concord with all words in the NP, but not yet in the verbal object. Type language: Wagaya.
- D. ii Noun classes are marked by prefixes; although concord is present, noun class affects object but not subject of verb. Type language: Ngarinjin.
- D. iii The prefixes of noun classes, with concord, reappear in both subject and object of the transitive verb (as in Bantu languages). Type language: Mawng.
- D. iv Similar to D. iii, but crossed by a system in which sex of the actor or goal is additionally indicated as a suffix to the verb complex. Type language: Gagadju.
- D. v No noun classes but the tense of the verb (past vs. non-past) exercises control over noun and pronoun subject, and in one case, object also. Type language: Bidabida (Pittapitta).

In the present issue, the treatment of the languages will not be based on this analysis for practical reasons regarding historical research, but it is hoped that in a subsequent work this approach may be developed in greater detail.

As a rule, Australian languages do not mark gender. A few have developed pronouns of the third person singular in which masculine and feminine are distinguished. The suffixing languages as a whole, however, pay little or no attention to gender, but the prefixing languages distinguish noun classes, usually between two and six of them; these are 'grammatical' rather than 'natural'. They would seem to have begun by grouping nouns under certain class headings, and

marking the class by a free morpheme. This happens in some of the present-day Cape York (CY) languages, in a form rather like the classifications made by modern naturalists for plants and animals, and it shows that the principle of classification was developed within Australia, however much it may resemble those of Burushaski or the Bantu languages. Details of this aspect of Australian languages are given in 'Grammatical Classification in Australia' in this volume.

True prefixing languages are illustrated most fully in those of the Northern Kimberley Division of West Australia, where (i) a noun belongs to one class and (ii) a system of concord is involved throughout the clause and any dependent clauses. The elaboration may vary to almost any degree. One example from Ngarinjin in this subgroup will illustrate the principle:

ma-rolale m-ɪnda m-aner wo: m-uwan-e:ri-gari maRa  
*river this big flowing it-do-CONT-which seeing*

mu-g-o:-ni  
*it-I-do-PAST*

The class marker is m(a)- and the whole sentence means *I saw this big river which is flowing*. They are geographically scattered and numerically a minority, so that it can hardly be claimed that they represent a genetically related group within Australia.

Yet the principle of noun classification is not limited to these and the CY languages. A few such languages are found about the Atherton Tablelands in North Queensland, and others on the Barkly Tablelands in the Northern Territory and Western Queensland - in fact that it is noticeable that they tend to occur in high areas, though this may or may not mean anything historically.

The majority of the languages are suffixing, and occur throughout the Continent. They fall into a number of subgroups and a great variety of types. The types which occur in some parts of Australia are set out in Table 1. This table is based on a formula for the sentence, as defined by Hockett: 'A sentence is a grammatical form which is not in construction with any other grammatical form' (Hockett 1958:199). As there is no theoretical need here for any particular analysis, the common shape is taken for granted, i.e. a sentence may be pictured as

± subject + predicate ± object.

In the intransitive sentence the object is not present; in many Australian languages also there may not be a separately expressed subject, so that + P becomes the only necessary element of a sentence.

Table 1: Types of Sentence Structure in Australian Languages<sup>1</sup>

(Subj. ±)	Noun Phrase (S)	<ul style="list-style-type: none"> <li>Case               <ul style="list-style-type: none"> <li>Nominative</li> <li>Ergative</li> </ul> </li> <li>Number - Singular dual, (- trial) plural</li> <li>Class               <ul style="list-style-type: none"> <li>No system</li> <li>Dual system</li> <li>Multiple classes</li> <li>Separate</li> </ul> </li> <li>Possession               <ul style="list-style-type: none"> <li>Suffixed</li> <li>Prefixed</li> </ul> </li> </ul>
(Pred. ±)	Verb Phrase	<ul style="list-style-type: none"> <li>No link with S or O</li> <li>Attention to S only               <ul style="list-style-type: none"> <li>No person or number</li> <li>Only number marked</li> </ul> </li> <li>Link between subject and object within verb</li> </ul>
(O ±)	Noun Phrase (O)	<ul style="list-style-type: none"> <li>Noun separate</li> <li>Noun incorporated</li> <li>Pronoun separate</li> <li>Pronoun incorporated</li> </ul>
(E ±)	Extensions	<ul style="list-style-type: none"> <li>Adverbial phrases located according to rules of individual language</li> </ul>

<sup>1</sup>Note: This does not imply SVO order. Such may occur, but SOV appears to be basic to these languages.



### 1.3. Structural Development of Australian Languages

Detailed analysis of the modern Australian languages, such as that which lies behind the present study, makes it possible to suggest certain stages of morphological and syntactic development through the millennia, though the order in which it is suggested that these took place may need adjustment.

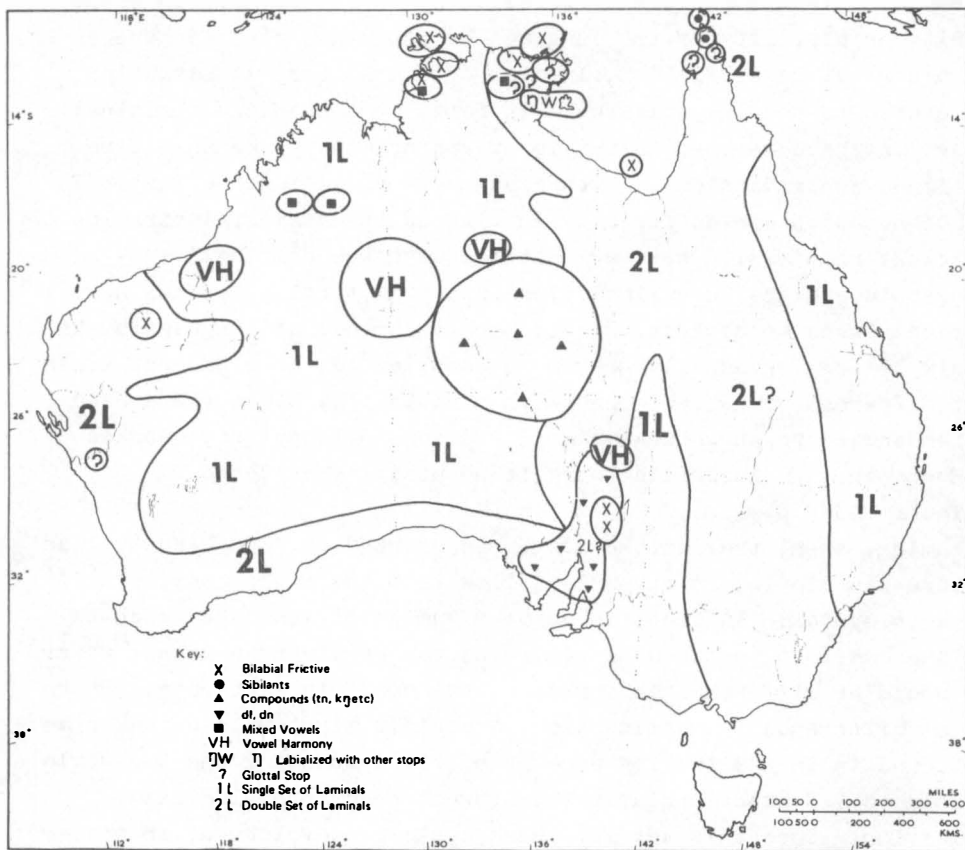
Everything points to a structurally simple proto-language, and this may be said without deciding the question already raised about the unity or plurality of the language or languages classed here as EA. EA is a sort of legal fiction, in view of the historical situation which confronts the investigator. In fact, more than one 'original' language may have reached Australia at approximately the same time. There is no contradiction in such a suggestion, seeing how little is known of human speech as far back in time as the view of Australian archaeology requires. The view that language was originally holophrastic and has been simplified into analytical types has no historical facts to back it. It is here assumed that language began in a simple form, gradually grew more complicated, in different areas and at different times, and that within historical times there have been tendencies to structural simplification in languages, such as Indo-European. In Australia there is no positive evidence (see Tauli 1958, *passim*).

Assuming, then, that at the stage represented by 'proto-Australian' structure was simple, it may well follow that there was considerable freedom in syntax. In fact, in quite a number of languages such is still the case. A sentence of six words can be arranged in six ways. There would be difference in emphasis, no doubt, in each case. There could be difference in meaning also: a subject might well be taken as object, and in this situation a means of distinguishing the two would be developed. Syntactic clarity might well need morphological complication. Once this set in, there could be development in any direction at all, and this would seem to be roughly what happened. How far it can be traced at present remains to be investigated. First, however, must come an investigation of the processes of sound change, as far as these can be traced.

## 2. HISTORICAL PHONOLOGY

### 2.1. Preliminaries

This paper will deal as briefly as possible with the nature of Australian consonant and vowel sounds. The present study is not a



Map 1: Phonological Traits, Occurrence of Less Common Phonemes (after Dixon, 1970)

'practical introduction to Australian phonetics', but a theoretical study of the origins and development of the languages as a whole. It is not necessary to say much about the phonetic level at all. The normal subdivision of sounds into consonant, semivowel and vowel obtains here as in other forms of human speech. So far as the *historical* study is concerned, a warning is needed: in tracing the history of language in Australia it is not possible to follow the strict method of demonstration that has been possible in reconstructing proto-Indo-European (PIE), nor even the degree of strictness that has been possible in some reconstructions of proto-Amerindian languages. In America, as in Australia, there are no earlier stages of language available for comparison as stepping stones, but in Australia there is the added difficulty of the time depth. Since demonstration as clearly as in PIE is impossible, impression or intuition must at times be allowed a voice, even if this is not strictly scientific.

Even so there are difficulties. 'The Neogrammarian's *absolute* regularity of sound change is untenable, and this has always been recognised in practice by most investigators. The French phoneticians and the Finno-Ugrian linguists have, in fact, suggested that the notion of the sound 'law' has to be downgraded to a 'tendency' only. In any case, it is the regular aspect of sound change that gives backbone to general linguistics, no matter how much the slipped discs of sporadic change may annoy the linguists' (Anttila 1972:85).

Not only is there difficulty in determining the primal sounds at this length of time, but semantic problems arise also as regards identification of words. In PIE reconstruction, some elasticity of semantic identification is accepted. In the original lexicostatistics of Swadesh, identity of meaning as well as comparability of form was insisted on. English *dog* and German *Hund* are obviously not cognates, yet the existence of English *hound* and German *Dogge*, 'mastiff' was not allowed for comparison: *hound*--> *Hund* and *dog*--> *Dogge* were rejected and the percentage of cognation was to that extent falsified.

In classical philology this principle of identity of meaning was not accepted as a criterion of cognation. If it had been, such counts would often have been substantially lowered. Of course, meaning is more static than form, but allowance must be made for meaning changes where origins can be traced and the processes of semantic change understood. In Australia many words exist that are obviously related while their meanings diverge greatly from language to language. Alternatively, a large number of homonyms must be accepted, but this

is to be avoided as far as possible. Thus, what is clearly the same root - \*gadja - appears not only as *elder brother* but as *mother* (\*ga:dja in proto-Paman [Hale]) and as *father* (gadja in Gugu-Badhun [Sutton]). The relation between this and \*gaga, *mother's brother* in Garadjari and other languages, also requires some untangling. Again, Ngayarda \*ba|gara, *clear space* (O'Grady) may link with ba|gaRa, *smooth, bald* and/or palaRa, *clear space* in Gugu-Badhun. How far semantic difference is to be accepted without invalidating an identification is sometimes a difficult question to answer.

The allowable limits of phonetic change also require consideration in languages which, like the Australian, have no diachronic documentation. Thus \*wali, *bad* (O'Grady) appears in Cape York areas as walwa (Gugu-Badhun) and \*wara (Hale, proto-Paman). Changes of final vowel between EA and the modern languages often seem considerable - in fact, it has been said for Australian: 'take care of the consonants and the vowels will take care of themselves' - but the insertion of -w- raises difficulty. Yet in the Northern Kimberley, Ngarinjin has -alwa, *bad*, to which noun class prefixes may be added and the result is w-alwa for the Class IV form in that language!<sup>1</sup>

These few considerations light up the nature of the general problem of sound correspondences. The nature of the sounds themselves in these languages must now be considered.

## 2.2. The Australian Sound Systems

### 2.2.1. The Consonants

Australian languages share almost identical sound systems everywhere on the continent, both in the sounds present and those that are lacking. Sibilants are lacking, fricatives are few, and often only allophones of plosives. The first problem is found in the nature of the plosives themselves, no matter what their position along the line of formations within the mouth.

As stated by Dixon, it is probably enough to say that 'voicing is not normally phonologically significant' (Dixon 1972:2). The plosive sounds belong, that is to say, to the group that has earlier been called 'devoiced' and later 'voiced lenis'. It is this that led the present author to use the symbols b, d, and g for the three chief members of the series; others have preferred to use p, t, and k. The latter set is satisfactory in languages where there is no distinct

<sup>1</sup>There is a chance that this stands for \*wa-wali-wa, as some of these languages have class marking by simultaneous prefix and suffix.

voiceless set, but the former have been retained here; these seem to allow for a more simple transition to voiced sounds in such combinations as nasal + plosive: mb rather than m+p > mb. In a number of languages there seem to be two sets of plosives, but there is, as yet, no agreement as to whether or not it is really a contrast between voiceless and voiced, nor does it seem to have importance for historical research. It would seem that Australian plosives were originally voiceless, or perhaps they were actually of that acoustically intermediate type that was noticed even by the untrained first settlers at Sydney in the 1790s.

The places of articulation of plosives also vary in different languages. O'Grady set out as the maximum series six places of articulation for plosives, with nasals corresponding to each.

	Bilabial	Lamino-dental	Lamino-palatal/alveolar	Apico-alveolar	Apico-domal (retroflex)	Dorso-velar
Oral	b	<u>d</u>	d'	d	ɖ	g
Nasal	m	<u>n</u>	n'	n	ɳ	ŋ'

The series is often labelled bilabial, interdental, alveolar, palatal; retroflex, velar (in the order b, d, d', d, ɖ, g). For d the digraph dj is frequently used for ease of printing (and this is done here). No argument as to the exact phonetic realities of the plosive series is needed; the question is unsettled, and for historical purposes it does not have to be solved. It will appear that there has been a process of amplification in the series of sounds; that EA probably had only bilabial, alveolar, palatal and velar sets. Modern languages have 4, 5, or 6 places of articulations, and in some areas a series with nasal release (e.g. Aranda bmaRa, *camp* or pmaRa if the other orthography is preferred. These releases are sometimes written as capitals (BaRa)). The modern Western Desert languages show considerable interchange between interdental, alveolar and palatal within the same word - not confusion: it is local variation - and similar uncertainty in other areas suggests that these distinctions were not originally phonemic and probably not made.<sup>1</sup>

<sup>1</sup>A detailed study of Australian laminal consonants is to be found in Dixon 1970b, and this highlights the difficulties surrounding the study of these non-peripheral sounds. Perhaps the fact that they are non-peripheral helps to account for their

The orders of consonants in Australian languages generally are plosives, nasals, liquids (l and r sounds, sometimes referred to as laterals and vibrants or rhotics) and semi-vowels. The latter are reductions of the vowels /u/ and /i/.

The suggestion for a PA consonant table (presumably EA: CA seems to have set the complications going) would then be:

	Bilabial	Alveolar	Velar
Plosive	b	d	g
Nasal	m	n	ŋ
Lateral		l, r	
Semivowel	w	R, j	(w)

The double inclusion of w reports the phonetic fact that it involves lip-rounding as well as similar back of tongue raising. The symbol /j/ answers to English 'y'; the capital /R/ is the untrilled continuant 'r' of southern English *run*, somewhat retroflexed. This sound is so common - and phonemic - in Australian languages as to justify reckoning among primitive sounds.

If a general alveolar series is accepted as PA, the question of the development of the present more complicated sets of sounds has to be faced. The laminal series is the most complicated. Of these, Dixon (1970b:92) decided that the original phonological system contained a single set of laminals: 'although allophones may have been redistributed...Modern double laminal languages have generalised on the proto-Australian patterns'. Lamino-palatal sounds have been introduced before i and lamino-dentals before a or u, in his opinion. There is, however, a more natural tendency to introduce laminals into palatal sounds before a high front vowel, as happens, for instance, in most Slavonic languages. At what stage retroflexion took place it is difficult to say. O'Grady (1966) shows in the Ngayardic languages a contrast of /panti/, *sit* with /paŋti/, *smell something*. The former would seem to be limited to that group (PA root is \*njin-, *sit*); the latter is found also in Dampier Land, Yugulda and Ngamini, the first being near Broome, Western Australia, the second near the Gulf of Carpentaria in Queensland, and the third in east Central Australia. O'Grady has also \*paŋa-l-, *shine, of moon*, Warnman and Julbaridja

historical instability. Dixon's map of distribution (p. 81 of article) is valuable in this connection.

banjal, as against \*baŋa, *head*, Njangumarda baŋanj, *reef* - though the semantic change makes some difficulty here. There is the possibility that the complication of the series may be ascribed to the CA stage but at present no assertion is being made about it. The question of /nj/ as a member of the original pattern has also to be considered. The stage then might be:

1	d	d	nj
2	<u>d</u> , d	<u>n</u> , n	
3	<u>s</u> , d	<u>n</u> , n	nj

with change of class of /nj/ as other palatals developed; a series of retroflexes developed *pari passu*, but in which stage remains uncertain.

The possibility cannot be dismissed that retroflexes do represent a development of an rC and RC cluster. This has been argued (e.g. Oates 1967) and Osborne (1974:10) is able to show cases in Tiwi where R + V becomes ɕ when the vowel is replaced inflectionally by a consonant, e.g. mwaRiŋa, *daughter* / mwaɕi, *son*. To make these instances into a general historical law would require more study than has been done.

For the purposes of the present study it is easier to use an arrangement of the phonemes differing from that used in the previous Table, viz. that originally suggested by Jakobson and Halle, according to which consonants are divided into peripheral and non-peripheral categories, or 'central' as the non-peripheral will be called here. Sufficiently detailed arrangement can be gained without using the acute/grave distinctions. The resulting Table of sounds will then look as in Table 2, which I owe to conversation with Dr C.L. Yallop of Macquarie University, New South Wales, Australia. It was applied by him to Aljawara of the Arandic Group: see also Harms (1968:31,37).

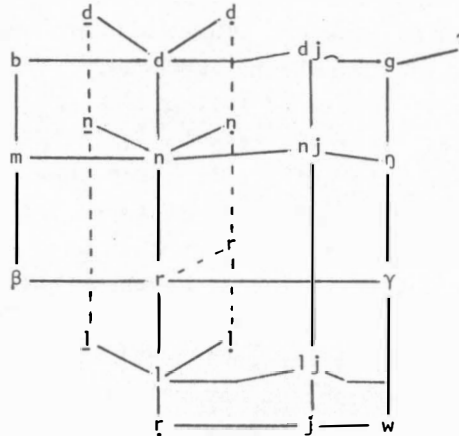
Table 2: Australian Consonants as Peripherals and Centrals

	PERIPHERAL	CENTRAL				PERIPHERAL
	Bilabial	Dental	Alveolar	Retroflex	Palatal	Velar
Plosive	b	<u>d</u>	d	ɖ	ɟ (dj)	g
Nasal	m	<u>n</u>	n	ɳ	ɲ (nj)	ŋ
Lateral		<u>l</u>	l	ɭ	ɽ' (lj)	
Rhotic			r	ɻ		
Continuant	w		R		ɣ (j)	ɣ

Table 2 allows for the full development of the laminal series as discussed above. So far as PA is concerned, the nasally released series can be overlooked: it is more circumscribed than the laminal expansions. Table 3 shows a three-dimensional arrangement of Australian sounds.

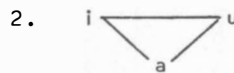
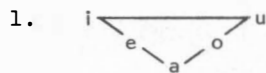
The particular advantage of this arrangement is that it allows the rather peculiar historical series of sound changes (to be discussed later) to be easily tabulated. These three methods then supply a likely historical commentary in diagram form on the complication of sound systems within Australia, applying to all groups of languages. For further discussion see Capell 1956/1962:6-7.

Table 3: Three Dimensional Table of Relationship between Members of the Australian Consonant System



### 2.2.2. The Vowels

The matter of Australian vowels is more complex than the consonants, chiefly by reason of the distribution of two kinds of vowel systems in the present-day languages - one working on a basis of four or five phonemic vowels, the other on a basis of three; in each case there are a number of allophones involved. The two types of consonant system may be schematised as follows:





The distribution of the allophones differs in each case, partly from language to language, partly from system to system. In addition, it is sometimes difficult to decide whether a given vowel is phonemic or not. Occurrence of schwa (ə) and (ɔ) are particularly hard to place. Fortunately, the present study does not involve decisions concerning the allophonic types to any great degree.

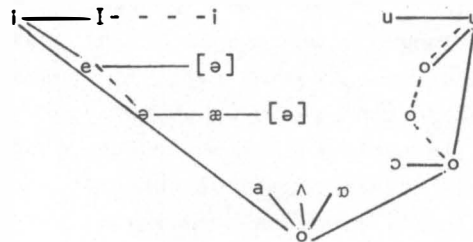
The question that is important here is: which of the two systems is the earlier? This is perhaps ambiguous as a method of framing the question. It could also be framed in the form: does the three-vowel system derive from the five-vowel system, or *vice versa*, or is each historically independent of the other? It is a specially important question because there is no corresponding dichotomy of languages on the basis of consonants. The consonant system is practically the same everywhere, but the vowel system is not so. The consonant system seems to have expanded over the millenia: might not the vowel system have done the same? In which case, the five-vowel system would be the result of an expansion of the three-vowel system. There are languages in which /ɔ/ does not occur, at least as a phoneme, i.e. there are phonemically four-vowel languages. This is so in parts of Victoria, and in Dampier Land, Bard seems to show /ɔ/. In Central Australia, Aranda has /ɛ/ as a phoneme and /ɔ/ is subphonemic, but in these languages there may be limitations on the occurrence of the vowels. In Aljawara, /ɛ/ appears between a palatal consonant and a following /r/ or before /rɪ/, while /ɔ/ precedes the labialised velar /gw/.

The distribution of the five-vowel languages is as follows:

1. Extreme south-west: Njungar, about Perth.
2. South: in South Australia from Banggala eastwards including Adelaide and the Murray Basin.
3. In Victoria: very generally, both east and west, including Gippsland, though /ɔ/ is sometimes not present as more than an allophone of /u/.
4. New South Wales right to the Queensland border: coastally and inland, including practically all the languages east of the Darling River.
5. North Queensland (Cape York): Thayorre, Mungkan, and some other languages.
6. Throughout Arnhem Land and the Northern Kimberley: only the north-eastern 'Yulngu' group has three vowels.
7. The Torres Straits languages, both Australian (west) and Papuan (east).
8. Central Australia: the Aranda languages.

When these areas are plotted against certain grammatical and vocabulary features, the whole appears to agree quite well with the archaeological chart of the oldest finds in Australia (Jones 1973:278). They present a somewhat marginal appearance in the sense of the Bartoli School of Areal Linguistics. The bulk of the languages will be shown to present archaic features and the total impression is that the five-vowel languages belong to the EA rather than the CA groups. The considerable range of allophones in the modern languages could have resulted from the adaptation of three-vowel languages to a five-vowel system which preceded them in a given area. In a language such as Aljawara, this type of incompatibility is especially noticeable. Certain features in syllable structure, to be mentioned below, seem to belong in this setting as well.

Allophonic variations of the five vowel systems may be set out in general terms in the following diagram. The conditions under which an allophone occurs vary somewhat among the languages, and do not concern the present account.



Details may be seen in such works as those of Strehlow (1944) for Aranda and Hercus (1969:32-40) for Wembawemba of Victoria, or Oates (1964:12-13) for Gunwinjgu in Arnhem Land. Consonant combinations are dealt with also in each of these works.

The allophonic variations in three-vowel languages are extracted from Capell (1967b:95ff.), where another type of diagram was used:



For the study of other phonological traits of Australian languages, general reference may be made to the same article and the attached bibliography. The diagram here differs from that of 1967, when it had not yet been recognised that the occurrence of /ɛ/ and /ɔ/ had historical importance and those varieties of /e/ and /o/ were not included in the printed diagram.

Questions of stress and intonation are outside the present study, but a word should be said about vowel harmony, which plays a considerable part in some of the three-vowel languages, particularly in the Western Desert and neighbouring parts of the Northern Territory. This follows in 2.2.3.

### 2.2.3. Other Phonological Features

Most of the other phonological features of importance in the description of a single language are language-bound and do not enter into the present study. Two, however, are germane to it; these are (a) initial vowel, and (b) vowel harmony.

(a) Some languages do not permit initial vowels, others do. In some cases, initial vowels arise from loss of original initial consonants. This is especially so in some of the Cape York languages and in the Aranda group. Thus, \**ŋali*, *you and I*, may become *ali*. It may be that in some cases where initial vowels are found, such a loss has produced them, but the fact remains that in Australia only a minority of languages permit initial vowels, and it would seem that the earlier Australian did not. Reference may be made to the detailed study of Olgolo by Dixon (1970c).

The question is of importance in the case of /i/ and /u/ as initials. In most instances, the phonetic structure of these vowels when word-initial is <sup>j</sup>i and <sup>w</sup>u respectively. In the three-vowel languages, this could suggest that initial /a/ might have arisen through loss of a consonant such as /ʔ/, but no opinion can be expressed on the subject at this point. In many vocabularies i- and u- are found written initially, but the on-glide must be taken for granted. In a few instances it is definitely not there. In the present work, ji- and wu- are written where such an on-glide is intended. The writer's feeling is that, in the early stages, initial vowel was not acceptable, as in Semitic, and some other languages. This is another feature that supports the idea of one original Australian - as indeed the whole phonological structure of the languages does, even while the divergences in vocabulary fight against it.

(b) Certain languages possess the phenomenon of vowel harmony. This is a mark of the Altaic and Ugrian languages in Asia, but the Australian system is different, as was pointed out in an earlier paper (Capell 1967:99ff.). In the Asian instances, vowels are divided into two groups occurring together in certain sets. In Australia, vowel harmony applies to suffixes, as it does in Asia, though not to the vocalisation of the stem, as in some Altaic and Finno-Ugrian languages.

In Waramunga, *gambadju-guna, of the father*, but *ɲamini-gina, of the cousin*, and *mina-gana, at evening*. It is the final vowel of the base that determines the first vowel of the suffix. In Waljbiri there is *ja-ni-lgi, and then goes*, but *ja-nu-lgu, and then went* (Capell 1962:19). A most exceptional system is that of Djingili, where the vowel of the suffix determines that of the root, as in *ɲadja-na-dju, I see her*, but *ɲidji-ɲinj-i-dju, we two see her*, and *ɲidji-ɲir-i-dju, we see her* (Chadwick 1968:227).

The languages that exhibit vowel harmony are nearly all spoken in the Northern Territory, and they are all three-vowel languages. The phenomenon is not found in five-vowel languages as so far recorded, and seems to belong to the heredity of the three-vowel systems.

In regard to the consonant structure of roots, there are certain other phonological matters that need to be considered. Briefly, these are as follows:

(a) The final consonants in Australian languages depend on laws proper to each language, not to the family as a whole. Some languages do not permit final consonants, others delimit which finals are permissible. Consonant clustering is not permitted initially, and in some languages also not finally, but in practically all they can occur internally. The most complicated final clusters are found in the languages of Arnhem Land and Victoria, and the general impression they raise is one of antiquity. Both these groups also are five-vowel languages. These languages appear to be archaic in other features also, and are classed here as EA. Most of the CA languages are phonologically simpler. Some languages which, on the evidence of vocabulary, appear to be basically EA are phonologically simpler and would seem to have been influenced by CA languages to the west of them. These facts will come out in the treatment of the word-store. Schmidt in his *Gliederung* (1919) paid considerable attention to the phonological patterns of words and, in each subdivision, set out what patterns occur in the languages concerned. Like his subgroupings themselves, however, these are only partially successful. Thus initial vowels do not appear in his South Central group, and only rarely along the Murray River. Final vowels are allowed in the South Central group except for Badjiri. Actually, if the subgroups are historically valuable at all, there is a broad division into

- (1) languages allowing only -V, and
- (2) languages allowing -C, but these can again be subdivided into

- (2a) almost any consonant is permitted as final: this includes Arnhem Land and Northern Kimberley, Yaralde, Victoria in general and the Yuwin group in New South Wales, and
- (2b) those that allow central consonants only - nasal, lateral and rhotic.

Here, however, some tend to lose -V, so that stops are allowed to be finals, as in the Perth area for example, and some others have -M by loss of final vowel. It therefore remains doubtful whether word structure has any real historical value in this sense, and the matter will not be expanded here.

(b) The five- and three-vowel systems, however, do seem to be of historical importance. In this matter, Australian languages present a neat contrast to the Semitic, in which scholars posit an original three-vowel system, later expanded to four, five or six vowels in different areas. In Australia, the dichotomy is clearly between the two types, and vocabulary distinction seems to correspond.

It is in the five-vowel languages that the more complex phonologies are found, together with the free use of initial vowels and final clusters of the types -rb, -lg, etc. These are quite impossible in the WD and other CA influenced areas. It seems, therefore, that the occurrence of these complex phonologies serves to mark off the EA languages in the continent. This does not, of course, mean that there is no CA influence in other areas of the west; in fact there usually is. To demarcate the two is one of the present problems.

### 2.3. Processes of Sound Change

If the phonology postulated as original to Australia is anywhere near correct, a process of elaboration has gone on during the earlier periods, and indeed is still in progress in certain areas such as the south WD. This is contrary to the general idea that languages tend to simplify. The idea is true indeed as regards structure, but not necessarily so as regards phonologies, and in Australia elaboration seems to have been the process. This needs to be looked at on the basis of reconstructed forms: what sounds are required to reconstruct forms that could easily have developed into those that are found today? Of course, this inductive establishment of a sound system must be worked out in reverse, given the fact that no diachronic information is to hand - a fact that obtrudes itself endlessly in Australia.

In these languages, transformations of consonants are easier to deal with than those of vowels - and more important as it happens - because

they are regular; even today there is considerable vowel variation at the phonetic level, especially where vowel harmony has come to play a part.

Consonants seem to interchange from language to language on the basis of their position in the scheme as peripheral or central. Peripherals tend to interchange with peripherals but not with centrals: /b/ will interchange with /g/ but not, for example, with /d/. Centrals tend to interchange with centrals, but not with peripherals. A glance at the wordlists given in other parts of this study will show many cases where such series of changes have taken place.

These may be regarded as the most common and regular sound changes. There are others, however, which are more restricted, in fact really determined. Such changes are not only interesting in themselves, but seem to have historical connections useful for the present purpose. Some have been studied by present-day linguists, and these need only be summarised here.

The most outstanding areas of the less common sound changes appear in the languages of Cape York Peninsula, and the Aranda Group. Some linguists, in fact, have suggested a closer relationship between these two areas, though it could, of course, be a case of parallel development.

One of the developments found in certain non-contiguous regions is the apparent development of two sets of stops. This could be of historical importance in Australia, but unfortunately there has been much argument as to the nature of the second set of sounds. It is not certain that the sounds in question exhibit the voiceless-voiced contrast. It has been suggested that the difference is one of tenseness rather than of voicing. Thus Sommer (1969:60) proposes a set p, t, k and another tenser set P, T, K to indicate the difference. This may well be right. The present author's experience in regard to Gubabwiyngu inclines him to this feeling. In this case, comparison of two sets of words in Gubabwiyngu and the closely related Gumadj of Yirrkala, showed that while one type of /g/ became /w/ in Gumadj, the other remained /g/. As remarked already, a change of peripherals b > g is not uncommon in Australia, and g > w is also common; exceptions appear to point to the second type of plosive. These two sets have been recorded in parts of Arnhem Land, including Djingang, but not only in the north-east, South Australia (Adnjamadhana) and Cape York (Gundjen and others). In each case they would seem to be local developments, as there is no contiguity factor present.

### 2.3.1. The Cape York Languages

Scholars have long regarded CY languages as standing well apart from those to the south of the Peninsula. At first sight, they look indeed, hardly Australia. It has been shown by K.L. Hale (1966), however, that given certain decidedly drastic sound changes, these languages can be fitted into the general picture. This section will summarise his findings and suggestions, and seek to fit them into the general historical pattern. Hale spoke first of a northern and southern subgrouping which he called the 'Paman' languages - a name based on *pama* (*bama*), *man* as a common root. Elsewhere in the present work it will be shown that the root here is \**baŋ*, reduplicated as \**baŋbaŋ* and then becoming \**bamba*(ŋ) which appears not only as *bama* in this part of Australia, but also as *wamba*, *wamb*, *amba*, *amb* in the Dampier Land region of the Northern Kimberley Division. It is thus much more widespread than appears at first sight. It should be noted in passing that Aranda does not belong to this group, but shares a form *adua*, *man* < \**baduŋ* which may or may not ultimately link with \**baŋ*.

#### 2.3.1.1. Northern CY Languages (Northern Paman or NP)

According to Hale (1966), these languages belong to the three-vowel group, and the theoretical word pattern is usually \**CV(:)CV(C)*, with severe limitations on the structure of each segment. Initial C is not limited; the vowel following it may be long or short, the final consonant is, as a rule, resonant if it occurs at all, but in many cases it has been lost. The first great change was a shift of stress to the second syllable, whereby the first syllable was usually lost, but it has left traces of itself in the nature of the second syllable (Hale 1966:168ff.).

These changes point back to times when a root already had a fixed pattern, but the patterns are those which have already been recognised as PA in some form or other (i.e. before any distinction between EA and CA can be recognised). In Yinwum *njdji*, *see*, for instance, it is possible to recognise \**nađji*, the nasal leaving its effect in the initial compound *njdj-*. But the commonest EA form is \**na-* or \**nja-*, without a second syllable. Yinwum *njdji* therefore has been developed from a later bi-syllabic root, in which an ending has been added to \**na*. That is to say, these NP languages would seem to be quite 'late' in their development: the second syllable of the root for *see* has already a history. As Hale puts it: 'it is clear from this example that the technical exposition of NP historical phonology must allow

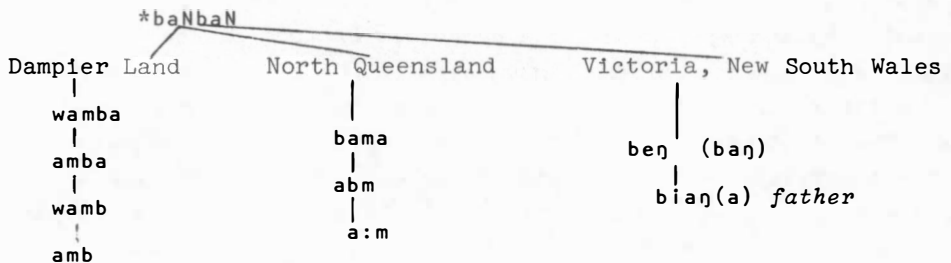
for relative ordering of events' (Hale 1966:169).

In dealing with these languages, Hale has introduced the term 'lenition' for a process by which long V: has affected the initial stops (\*S) and clusters of nasal and stop (\*NS) immediately following, usually producing voiced fricatives. To this extent the usage is sufficiently like the better known usage of 'lenition' in Celtic languages for it to be retained. So \*/b + mb/ > /β/; \*/dj + njdj/ > /ð/ and \*/g + ŋg/ > /ɣ/.

### 2.3.1.2. The Southern CY Languages

The gugu- languages do not share the reductions evident in the north, west and south-west CY languages. This appears in an unpublished list of Gugu-Badhun words compiled by P.J. Sutton, but -C loss is found at times in the Flinders Island language: olbu, *old man* answers to Gugu-Ya'o djilbu, but durgal, *straight* is the same in both Flinders Island and Ngayarda. However, another paper by Sutton (1976) on Mbara (Midjamba) on the Woolgar and Stawell Rivers, in the extreme south of the CY area, does show the initial syllable losses (e.g. \*ŋali, *we two* > li) and most of the other characteristics. This whole area is poorly recorded (almost lost) but it shows great linguistic complication.

If phonemic innovations count towards classification, the CY languages are definitely a separate group: that they should be called Paman is not so certain, in view of the Dampier Land and Victorian languages sharing with them the very word after which they have been named. This root is discussed in the final section of this paper; but it is of use to reproduce the diagram here that will be used there. This rests on a root \*baNbaN, which appears in southern Australia uncompounded as *person*, or *father*, largely in Victoria and coastal New South Wales. The root may be reduplicated and, if the final velar nasal is replaced by an undefined nasal N, it takes the form \*baNbaN, and shows the following distributions in its phonetic variations:





It is, of course, possible that \*baŋ may represent \*baduŋ but positive evidence is lacking.

At this point the exact locations need not be specified. There is some change of meaning, but not beyond an acceptable degree, especially in view of the wide semantic changes in the application of kinship terms in Australian languages. On this basis, however, if CY languages are to be labelled 'Paman', so should those of Dampier Land and Victoria-New South Wales. This will be discussed in 3.3.3. below.

### 2.3.2. Central Australian Languages

The relationship of CY to the Aranda group has been suggested as something closer than might be expected because of their sharing a number of sound changes between them, such as the loss of initial consonants or syllables. The languages involved are Aranda itself (in a number of dialects) Aljawara, Andegerebina, Yarowinga and Gajdidj.

Comparison of the Arandic group with CA and other widespread words shows changes often as drastic as those of CY. They are outlined for Aranda itself in NAAL 2, p. 100ff. Aljawara has similar but often still more drastic changes, e.g. w- is usually kept in Aranda but lost in Aljawara. Gajdidj is very similarly patterned. The first demonstration of the facts for this group was made by K.L. Hale (1962: 171ff.), though he did not tabulate the sound correlations.

Some of the transformations, especially of CA forms in the Arandic group can be summarised here from the material in NAAL, with additions from Aljawara and Andegerebina:

1. C- kept: this applies clearly to semi-vowels in Aranda roots such as WD wan-, *blow, of wind* > Aranda wana-; bo-, *blow with mouth* > Aranda bo-; ya(n)-, *go* > Aranda yana-, *send*. But in these cases Aljawara mostly loses the consonant ang-, *speak* (< \*wanga), Gajdidj akŋga.
2. C- lost: ŋ- in Aranda, Aljawara uRa, *fire* < \*ŋuRa (but Gajdidj warra); Aranda and Aljawara ala, *nose* (Gajdidj ila) < \*mulanŋ; Aranda and Aljawara aɟa, *I (erg)* (Gajdidj ajiŋ) < \*ŋa(dja); Aranda and Aljawara unda, *you (erg)* < \*nundu; g- in Aranda, Yarowinga and Gajdidj ana (Aljawara, Andegerebina adna) *excrement* < \*gunanŋ and some WD roots such as gunga, *raw* > Aranda anga; wildja, *shade* > ildja, *hut*.

3. Initial syllable lost: *ra, you, pl.* < \*njura; Aranda *linja*, Gajdidj *alinji*, Alyawara *alinja*, *tongue* < \*dalaŋ; WD *gudjara, two* > Aranda *dara*, Gajdidj, Alyawara *ađira*; WD *nju-mbala, you two* > Aranda *mbala*, Alyawara *ambula*; Aranda *bulja*, *soft*, cf. Njangumada *gabulju*.

There has clearly been quite early borrowing from WD, while the phonetic changes were still active. The example of *njumbala, you two* > *mbala* is instructive, for it is *njundu, you (sing.) + bala, he* in Aranda but *njundu + bula, two* (EA \*buladj) in Alyawara. Each root, \*buladj (EA) and \*gudjara (CA) has its area of occurrence in WD languages (Capell 1955:285ff.). Aranda *ilina*, Alyawara *aylina, we (excl.)* is \*ŋali, *you and I* with -na (exclusive suffix) as also in Aranda *anuna*, Alyawara *anuningira, we (excl.)*. In some cases Alyawara seems to reject more than one syllable, if *Ra, he* is to be paralleled with WD *balaRa*.

Thus the Central Australian languages of the Arandic Group share a set of rather similar phonetic innovations, but this does not make them Paman, because their corresponding word for *man* is a form of \*baduŋ with a set of phonetic changes peculiar to themselves: \*adua. The nearest to this is, in fact, the \*aru of Northern Kimberley and *bilu-va* of Laragia. The CY forms, from a reduplicated \*baN, are quite distinct, though it is possible to regard them as based on an abbreviation of \*ba(du)ŋ.

Each set of tantalisingly similar innovations is best regarded as developing *in loco*. The resulting language will then have developed further into a set of related languages within its present territory.

In spite of the agreement between CY languages and the Aranda group as regards types of phonetic change, the general evidence points to the development of the CY changes locally and at a comparatively recent date. As far as words are concerned, the proportion of CA in the CYPen languages is fairly high, but at the same time the CA words seem to have come into the languages in an already changed form. The evidence for this statement rests in part at least on some unpublished work by L.F. Oates in Murawari. In the languages of the 'Kana'-group of which this one is typical, the CA forms are broken down to the extent that many of them have lost the final consonants, but the initial losses and other characteristics of CYPen are not present. Compare the following list:

Original	CYPen	Murawari	English
*guyaŋ	*guya	guya	<i>fish</i>
*gunaŋ	*guna	guna	<i>excrement</i>
*maRaŋ	*maRa	maRa	<i>hand</i>
*miyil	*miyil	mi:l (imiyil)	<i>eye</i>
*ŋamaŋ	*ŋama	ŋama	<i>breast</i>
*binaŋ	*bina	bina	<i>ear</i>
*buladj	*bula	bula	<i>two; they two</i>
*minjaŋ	*minja	minjan	<i>what</i>

Here it should be noted that the CY list is starred, to represent forms which came into that region and were modified locally. On the other hand, the last word shows that Murawari carried the memory at least of a final consonant even though that was changed before being lost in the more northerly languages.

From examples such as these it is natural to conclude that there has been a south to north movement of the vocabulary cited, with subsequent isolation in Cape York and further drastic modification there. These words are all CA; where they occur with equally drastic modification in the Aranda group the latter must be independent parallel changes.

Changes once made cannot be unmade later. It is therefore a more economic conclusion to link the words with CY languages and with the Aranda by the idea of two separate departures from the original, rather than a move backwards from CY. Mrs Oates also points to some optional losses of C- in Murawari, such as (d)an̄ga, *to fly*, for which there seems to be no CA root. Moreover, Murawari does admit final consonants, as in milindj, *mud*. Final consonants are therefore not rejected, and any such loss must have occurred before the CA words in question reached Murawari, much less CY. Some of the Murawari vocabulary is certainly EA, such as da:m(b) 'subsection', which offers itself for comparison with Ngarinjin (NK) dambu(n), *country, camp, tribal country* - also found in Juwinbara djambu - and in Ngarinjin this word changes noun class according as it is used generally or specifically.

In south eastern Australia it is not so much a matter of sound changes which determine groupings. Sound systems are almost monotonously uniform in Victoria and New South Wales. It is a matter of complete lexical differences and, to a degree, also morphological differences

between languages. This fact is puzzling when the types of sound innovations within obviously isolated sets of languages such as those of Central Australia and CY are considered. What is the difference in the history behind each? Do the facts imply that the south-eastern languages are not ultimately one at all? This seems to have been so in the Asian Middle East, and there it was no doubt a matter of numerous crossing invasions.

### 2.3.3. The Western Desert (WD) Languages

In phonological structure these are rather like the Romance as compared with the Germanic languages: their structures are generally much simpler and they sound - as they are - less heavily consonantal than the languages of Victoria and the south-east in general, on the one side, and the Aranda group on the other. They are three-vowel languages, although of course the normal range of allophones are present, governed by their environments. In most of them it is allowed to commence a word with a vowel, and /a.i.u/ may therefore all be initial. Syllable structure is VC, CV or CVC, but they are not monosyllabic, these structures will combine within the one word. However, the rules of consonant combination within the body of a word - the nature of the phonological word - may be rather strictly governed by a number of rules which cannot be given in detail here. One feature that is peculiar to these languages is that only certain consonants may be word-final; any consonant which is not permitted in final position is strengthened by a final syllable -ba. Thus in Bindubi, mangur, *three* is not permitted, and so becomes maṅurba. The CA root dalaŋ, *tongue*, here becomes djaḷinba; *thigh* is yaṅgalba. It is tempting to regard this -ba as not a meaningless syllable, designed simply to make an acceptable word-form, but as the third singular ba, *he, she, it*, in which case the sentence structure would be like that of Pidgin English, man i kam, *the man comes*. The difficulty about the explanation is that it is not limited to third singular subject position. Hansen and Hansen (1969) quote gandjilj-baŋma ɲariŋu, *he put the ribs down*; wadi mangur-ba-la galbagadi-ŋu, *we three men climbed*; if the explanation is to hold then the pronoun suffix must be regarded as devoid of meaning in the modern language and therefore also in its use. This is possible, but cannot at the moment be put forward as more than a suggestion. The position remains, then, that in WD languages some finals are permitted and others are not. It must also be added that some WD languages do not permit finals at all, or only a final -n, -l or -r. The whole system remains as something historically late and highly developed in its details.

Another suggestion that these languages represent a late stage of evolution is the fact that the laminal series (2.4.1. below) is fully developed in them: Dixon's map (1970b:81) shows this fact. They are at once developed and simplified, and this suggests a long period of evolution for the languages. This development will have taken place within the area occupied by the languages at present. Following sections will show that the outliers of the group in north-eastern Arnhem Land have developed again their own peculiarities, and that both differ greatly from the more archaic type of the five-vowel languages of Victoria and the south-east in general. In spite of the vocabulary agreements that will appear between these latter and the Arnhem Land and Northern Kimberley languages (also five-vowel and quite clearly connected with those of the south-east). Even here, too, the Northern Kimberley languages present a somewhat simpler phonetic type than those of the south-east.

The WD languages present a phonetic type *suigeneris*, which could never be confused with those of other areas, whether Cape York, Victoria, Arnhem Land or Central Australia. There is a clear division on this level between Aranda and Waljbiri: Aljawara is a little closer to Waljbiri perhaps, but still noticeably Arandic.

Mention may be made here of the so-called Murngin and Yulngu languages of north-east Arnhem Land. In many points of structure they seem to be an intrusion from Central Australia, and hence can be treated for the present purposes as part of the WD languages. Yet their phonemic structure is peculiar to themselves. They are five-vowel languages, but allow consonant clusters that are difficult to think of in WD languages. Moreover, they have a variety of final consonant clusters which are not part of WD structure. In all this they seem to rest on a non-WD basis, presumably that of Arnhem Land languages which they have displaced or with which they have combined during centuries of coexistence. Moreover, they have developed a second set of plosives, which have already been mentioned.

For general notes on WD phonologies reference may be made to Hansen and Hansen, James Marsh, and Joyce Hudson and Eirlys Richards, all in the same issue of *Oceanic Linguistics* (8/2, 1969), and for a typical Yulngu language, to Ray Wood (1977). In each case other references will be found in addition.

In a sentence, the WD languages present a type of phonology as different from those of the other languages as are their structures, while the languages of north-east Arnhem Land look quite clearly like

developments of west Arnhem Land languages under WD influence, their basic structures being archaic, but overlaid by more modern forms of speech.

#### 2.3.4. The Archaic Languages of the South-East and Extreme North

The title of this subsection in its wording seems rather to beg the entire question, and this is admitted; but it is hoped to show later that the languages here treated are what the title claims and that vocabulary study will strengthen the connection in due course.

In actual fact, the languages of the Murray Basin, Victoria and coastal New South Wales, which form the group here under investigation, differ quite a deal in vocabulary from other parts of Australia, and the CA element has every appearance of being introduced. Some of the words are found in Arnhem Land and the Northern Kimberley, often in varied meanings.

While, of course, all the languages are not provided with identical sound systems, yet they do fit the general Australian pattern; the real difference lies in the syllable structure rather than in the individual sounds: the northern and southern languages are quite different from the others already mentioned. In what follows, the north is represented by Mawng, of Goulburn Islands, and material from Capell and Hinch (1970) is used to illustrate the languages.

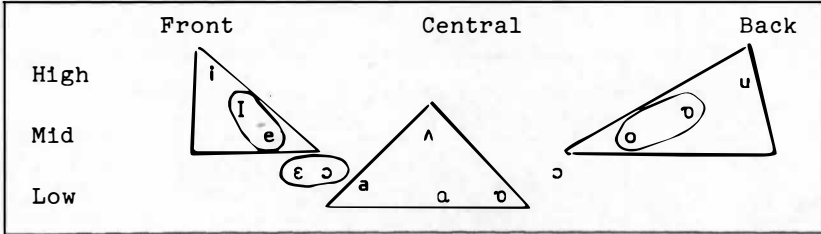
The consonant system of Mawng is exhibited below:

Table 4: Vowels and Consonants of Mawng, Arnhem Land  
(From A. Capell and H.E. Hinch, *Maung Grammar, Texts and Vocabulary.*)

	Bilabial	Alveolar	Retroflex	Palatodental	Velar
Stops	b	d	ɖ	dj	g
Nasals	m	n	ɳ	nj	ŋ
Laterals		l	ɭ		
Rhotics		r	ɻ		
Fricatives	w	ʀ		j	
	Front		Central		Back
High	i				u
Mid	ɛ			ɔ	
Low			a		

Details of the vowel system of the same language follow in the next diagram, from the same source:

Table 5: Vowels of Mawng on the Phonetic Level



Their sounds are those of normal Australian languages in most parts of the continent, plus or minus one or two, principally consonants. It is in the consonant clusters, however, that the northern and extreme southern languages differ markedly. The following Table, taken again from the same source, sets out the consonant clusters of Mawng, first the CC and then the CCC clusters. There are considerable morpho-phonemic changes when consonants meet in the processes of inflection, and these are to be seen in Capell and Hinch (1970:36). For the present purposes they are irrelevant. The possible Mawng clusters are as follows:

Table 6: Consonant Clusters in Mawng  
Word-Medial Consonant Clusters (CC)

First C	Second C														
	b	dj	d	ɖ	g	m	nj	n	ŋ	w	j	r	l	ɣ	
b	-	bdj	-	-	bg	-	-	-	-	-	-	-	-	-	
dj	djb	-	-	-	-	-	-	-	-	-	-	-	-	-	
dj	djb	-	-	-	djg	djm	-	-	-	-	-	-	-	-	
d	db	ddj	-	-	dg	-	-	-	-	dw	-	-	-	-	
ɖ	ɖb	ɖdj	-	-	ɖg	-	-	-	-	ɖw	-	-	-	-	
g	gb	gdj	-	-	-	-	-	-	gŋ	-	-	-	-	-	
m	mb	mdj	md	mɖ	mg	-	-	-	mŋ	-	-	-	-	-	
nj	njb	njdj	-	-	njg	njm	-	njn	njŋ	-	-	-	-	-	
n	nb	ndj	nd	-	ng	nm	nnj	-	nŋ	-	n-j	-	-	-	
ŋ	ŋb	ŋdj	-	ŋɖ	ŋg	ŋm	-	-	ŋŋ	-	-	-	-	-	
ŋ	ŋb	ŋdj	-	-	ŋg	ŋm	-	-	-	-	-	-	-	-	
w	wb	wdj	-	wɖ	wg	-	-	wn	wŋ	-	-	wr	wl	wɣ	
r	rb	rdj	-	-	rg	rm	-	-	rŋ	rw	r	-	-	rɣ	
ɾ	ɾb	ɾdj	-	-	ɾg	ɾm	-	-	ɾŋ	ɾw	ɾ	-	-	ɾɣ	
ɾ	-	-	-	-	-	-	-	-	-	rw	-	-	-	-	
l	lb	ldj	ld	-	lg	lm	-	-	lŋ	lw	l	-	-	lɣ	
l	lb	ldj	-	-	lg	lm	-	-	lŋ	lw	l	-	-	lɣ	



Word-Medial Consonant Clusters (CCC)

!gb	!gdj	!nb	-	-	-
lgb	lgdj	lnb	-	lng	-
rgb	rgdj	-	-	-	-
rgb	rgdj	-	-	rng	-
jgb	-	-	jndj	jng	-
wgb	-	-	wndj	wng	wndj

These clusters differ in complexity and sometimes also in actual shape and content from those allowable in the central parts of the continent, and of course the complex historical changes which mark the CY languages have not taken place in these other areas of the continent. Comparison with Victoria and New South Wales can now be instructive, but unfortunately the fact that most of these languages are extinct or almost extinct makes morphophonemic comparison less satisfactory.

The remaining Victorian languages have been studied by Hercus (1969, 2 vols), and her very careful study of sound systems as they are heard in the surviving languages produces effects highly comparable to those of the far north. Her outline of Wembawemba phonetics reads almost like that of Mawng, except for the less complicated morphophonemic changes. Of the interdental only ɟ is recorded, not ɲ or ʃ: this may be modern degradation of richer system. The following are the internal consonant clusters: it will be noted that *br-* is admitted, but this may be *ber-* (as in *Gwini* of Forrest River, Northern Kimberley): *gw-* seems to have been a PA combination, e.g. EA \**gwijaŋ*, *fish*. It is probably to be regarded as a *g* with lip-rounding rather than as a combination. Hercus' Table (p. 15) appears as follows and recalls Mawng very clearly:

Table 7: Combinations of Consonants in Wembawemba

					-gw-
Medial	-mb-	-nb-			
	-mbr-				
		-nd-			
			-ŋd-		
		-ndj-		-njdj-	
			-rg-		-ŋg-
		-nm-	-ŋ-		-ŋw-
					-gw-
	-lb-	-rb-	-rb-		
	-lm-	-rm-	-rm-		
		-rmb-	-rmb-		
		-rd-			
		-rn-			
	-lg-	-rg-	-rg-		
		-rŋ-	-rŋ-		
		-rŋg-	-rŋg-		
		-rw-			
Final	-lb	-rb	-rb		
	-lm	-rm	-rm		
	-lg	-rg	-rg		
		-rn	-rŋ		

As will appear later, there is a clear line of demarcation between the languages of Gippsland and the rest of Victoria, in spite of which Hercus (p. 197) can write: 'Nevertheless, there seem to be some definite links between the Jaralde group of languages, Jodajoda and Gaṇai. In grammar Jaralde stands to some extent apart, though there are some resemblances with Jodajoda, such as for instance the use of a special injunctive or prohibitive particle'. She remarks on the absence of fricatives from Garnay and a special pronunciation of ɟ.

In eastern New South Wales the phonetic evidence is largely lacking on account of extinction of languages. Eades in her grammar of Dharawal and Dhurga (Eades 1976:40) after much discussion, produces

what she regards as likely consonant clusters in the following Table:

Table 8: Consonant Combinations in Dharawal and Dhurga

CC	C(V)C or (C)C		
homorganic nasal + stop mb, bnd, <u>nd</u> , ng			
n + peripheral stop nb			
l, r + stop, nasal lm      rn lb ld lg	ln, rm rb, rd	rnj ld, rd	
stop, nasal + l, r nl, nl bl, dl, gl	gr	mr djr	
l, r + w, j lw	rw	lj, rj	
Miscellaneous nw, lr, jd	wd, wr	jl, rl	

There is much in this work that to the present writer it seems necessary to reject as incorrect, but the above Table seems to present a possibility for the languages of the south-eastern coast of New South Wales, and here again there is definite resemblance to the more complicated languages of north Australia. If it can be thought that peoples originally related to each other separated at some distant point of time, and whereas some remained in the north while others finally moved right across the continent, such variation - especially simplification - seems very natural in the linguistic history of the tribes.<sup>1</sup>

<sup>1</sup>Eades rules out CCC on grounds that seem - like much of her book - to the present writer quite uncertain and unsatisfactory. The general style of these languages suggests that CCC may have occurred.

One consonant exists in Australian languages which has not been included in the tables nor mentioned hitherto and that is the glottal stop. There are two types of areas of occurrence of this and two different functions. It does not seem to occur initially anywhere except perhaps (if O'Grady is right - see O'Grady 1976:61) in Umpila but it does occur finally in the Yulngu languages and others in Arnhem Land. In the latter group, however, it does not occur initially at all, but only in the final position, and most often as syllable final before another consonant. In Ranjbarngu, for instance, the future tense of a verb is formed by means of a repetition of final consonant with a glottal stop interposed, e.g. *ḡawarʔra*, *I shall throw it away* (Capell 1942:37). The two types of occurrence are obviously different. In the one case the glottal stop is a phoneme, and occurs as such between vowels in Gandju of Lockhardt River: *guʔa:ga*, *dog*, or after a consonant: *ḡalʔa*, *fish*. In Arnhem Land there has been much discussion of the function of the glottal stop. It is held to be not a true phoneme, and not to be included in the list of phonemes. In Gandju it seems to replace an earlier \*R, as in *maʔa*, *hand* < \*maRaḡ but in Arnhem Land (Buwani, Dalabon, Ranjbarngu and the Yulngu languages, as well as Gunwinjgu) there is as yet no final decision as to its function and place in the languages. Schebeck (1972 and elsewhere) interprets it as a syllable 'accent' involving a 'glottal rhythm': McKay in an unpublished thesis (1975) treats it as a syllabic feature having certain resemblances to the Danish *stød* and the glottal ending in Finnish. It will not be further discussed here.

#### 2.4. Historical Phonological Change in Detail

This section will summarise chiefly consonantal changes indicated by vocabulary comparisons of present-day languages: how far such changes can be read into the past cannot be defined. The greater time depth makes anything like the assurance that accompanies Proto-Indo-European studies unattainable in Australia. In the morphological field it is impossible to restore a feature that has disappeared in all the daughter languages of a family - the well-known loss of the inflected Latin future in all the Romance languages is a case in point, for if Latin were unknown such a formation could never be guessed. So there may well have been both morphological and phonological changes in Australia that can never be rediscovered. What is offered here is therefore controvertible and no defence can be made.

Three positions of a consonant must be accounted for: initial, medial and final. The occurrence of -C and its nature is at present

language-limited and may always have been so. Hence there will be only incidental discussion of this position. The most important example is the occurrence of final -ŋ which is generally retained where at least one language shows it, and in some cases where none do. In many instances it has been lost because most modern languages reject all final consonants or allow only a limited set. Final -dj is rare, but is still found in some areas: \*buladj, *two*, is a clear EA example occurring only in south eastern Australia - elsewhere it is always *bula*, and such a root would have been restored except for the south eastern languages. But there is no reason to suggest that \*buladj is a later form in south eastern Australia, for it would be unmotivated. Similarly, the pronoun individualising suffix -wa appears as -wadj in Nuggubuyu, but \*-badj is taken to be the original form of it. The fact that it is added to an ergative form (ŋa-ju-) only indicates that in the given language the pronoun \*ŋaju, *I*, was received 'ready made' in an ergative form, without ergative meaning necessarily following. It may even be desirable to write this -wa as a separate enclitic word. See further in 3.3.3.

Few examples of the changes postulated here will be presented in the text: they belong to the vocabulary. As for vowel changes, it would seem that Australia is a place where one may indeed look after the consonants and leave the vowels largely to look after themselves: in short, the history of vowel change in Australia remains much less complete than that of consonants and does not seem to be so regular.

#### 2.4.1. Consonants

From what has been said already, the Australian consonantal system is to be traced chiefly from EA: what differences there are to be accounted from CA must still be worked out. The consonantal alphabet assigned to EA here lacks the subdivisions of the laminal series and a number of other later developments as already indicated.

In the following pages, just a few of the more obvious consonant changes between languages in Australia are dealt with: it is impossible to do more within the limits available. Where a large number of languages are involved and a considerable time-depth which is undocumented, only general indications can be given. A fuller study would belong to the lexicon of an Australian Historical Dictionary, which is beyond the possibility of compilation at this stage.

All this being granted, a brief survey of a few outstanding facts is all that can be given - and even then consonant change is easier to deal with than vowel change. Not all consonants are illustrated here.

CONSONANTS

(a) Plosives:

/b/. Examples occur of b- kept; or changed to w or g or m or lost entirely. Final -b can also become -m in Victoria, as W. Bungandidj gedubgedub, *boomerang*; N.W. gadimgadim.<sup>1</sup>

Medial -b- may have another origin. The NK has a root \*malara, *forehead*; Laragiya madbarma = \*ma+m(a)lar(a)+ma, the same root with the Cl.V marker ma prefixed and suffixed simultaneously. Reduction of l+r has then produced d+b, a not uncommon combination in this area.

(b) Laminals:

Sounds classed as laminals may be either stops or nasals. In Australia the sets usually found are:

dental	alveolar
<u>d</u>	dj
<u>n</u>	<u>nj</u>

In Australian languages these interact very largely with the apical series:

dental	domal
d	ḍ

This may then produce four series of stops and nasals:

lamino-		apico-	
dental	alveolar	dental	domal
<u>d</u>	dj	d	ḍ
<u>n</u>	nj	n	ṇ

<sup>1</sup>Apart from the fact that this is a reduplication and that nothing is known of \*gedub or \*gadim as a simple root, it is difficult to say which was the earlier; but occurrences in other parts of Australia suggest that plosive to nasal is the commoner change.

Interchanges within these sets have been studied in detail by Dixon (1970b). There is usually laminal contrast within a language, and Dixon's summary is as follows: (i) domal (retroflexed) consonants are missing over a considerable area of the north-east; (ii) some languages have only one laminal series, and in this case the major allophone is usually palatal. Phonetic detail given by Dixon is irrelevant from the viewpoint of historical linguistics, as there is no intention here of trying to trace out details of possible development in the languages. He then concludes that four types of stop-nasal system are found in Australia:

1. With retroflexes and two laminal series

b   d   dj   d   ɖ   g  
 m   n   nj   n   ŋ   ŋ

2. With two laminal series but no retroflex

b   d   dj   d   g  
 m   n   nj   n   ŋ

3. With retroflexes but only one laminal series

b   d   ɖ   dj   g  
 m   n   ŋ   nj   ŋ

4. Without retroflexes but with only one laminal series

b   dj   d   g  
 m   nj   n   ŋ

The distribution of these types is shown in Dixon's map (1970b:81) and it is so irregular that there can be no doubt that all the variations from the (4) system have been developed locally and presumably at different stages. For the *local* histories of language groups the historical order of these developments may well be important, in fact crucial, but for the establishment of original Australian series there can be no question: early Australian languages did not have either the lamino-dental (interdental) nor the laminopalatal/alveolar (palatal) series of either stops or nasals. Dixon's conclusion about the reasons for the developments and the processes of them have been mentioned earlier.

In dealing with sound changes within this series, therefore, it will be taken that there is one denti-alveolar set to be considered, and



this will be indicated here by /d̥/. The changes found in the modern languages are the following, taking as examples the root \*baduŋ, *man*, for those languages in which the root occurs:

d̥-kept: Luridja (*badu*); WD generally (*wadi*). This is independently of the phonetic realisation as advanced to interdental or backed to palatal. The retroflex realisation is found in Bidjara (*maɖi*), Unggumi (*aɖi*), Aranda group (*aɖya* < *baduŋ* + *a*).

d̥- > /r/ flapped: Central Queensland (*mari*). It should be noted that in Arnhem Land there is also a true retroflexed flap (ɾ) as in the clan name *Maraɾba* in the N.E. AL dialects. In NK there is *aRu*, *man* in Ngarinjin, which is to be distinguished from the flapped *r* in *aru*, *snake*.

-d̥- > -w- seems possible in the same root \*baduŋ allowing the acceptance of Ngarimawuru (Yodayoda) *bawu*, Bangeranj *bawa*. That the realisation is acceptable is suggested by languages of the Upper Murray region which show *bawaŋ* < \*baduŋ.

(c) Velars:

g- raises some problems in certain languages. As a rule it seems to be very stable. Roots \*gamba, *burn*, *cook*, and \*gumbu, *urine* are found widely over Australia and almost always with the initial consonant kept. Initial g- is lost only in the Aranda group and Cape York. In the former, Andegerebina *mbwa* = (u)mb-u, *urine* < \*gumbu, with the additional final -a that is found also in Aranda group *aɖya*, *man* < \*baduŋ, and the mutation of the first vowel is found also in some CY languages. Similarly, from \*gunaŋ, *excrement*, Bularnu *gudna*, Bidabida *guna*. The root \*gamba is very tenacious, yet again Aranda *mba-*. In the case of the root \*guyaŋ, *fish*, g- never disappears, but it is doubtful whether the root itself is \*guyaŋ or *gwiyaŋ*. In terms of distribution either seems possible.

(d) Nasals:

The nasals also are generally preserved, especially as initials. As internals they are not quite so invariable, and as finals, often rejected: it depends on whether the language allows final consonants, and if so, whether these include nasals. In general some languages that keep final nasals do not allow non-nasal terminals. It is characteristic of the WD languages that they allow final /-n/ but not /-ŋ/. Where final /-nɟ/ is found, this may replace original /-ŋ/. Individual nasals call for specific definition.

/m/ appears to be extremely stable. Such roots as \* $\eta$ ama $\eta$ , *breast*, or \*maRa $\eta$ , *hand*, and the probably related \*ma-, *take*, retain initial m- even in CY and Aranda languages.

#### 2.4.2. The Puzzle of Root Establishment

In many instances such rules for sound development as are given in the preceding sections do not seem to work, and this means either that there are mistakes in the formulation or cross-influences in the application. There is frequently much difficulty in establishing a consistent original form for a word. Of course the length of time involved and the lack of historical information may help to account for these difficulties. In Australian languages in particular there are many cases in which either the initial or the final consonant seems to be doubtful. In Sommer's list, based on Hale (Sommer 1969) the device of indicating a doubtful consonant by the use of C-, meaning some undefined consonant, is used and gives recognition to the difficulty. In such a case it can be taken that the true original consonant is elusive. The given material presents variants that do not seem to suit any regular pattern of sound change that might be expected. One is sometimes constrained not to accept an instance because it does not fit expectation.

The expectation that underlies restoration is that EA is older than CA, and that the former is chiefly eastern, while the latter is basically a western form of an original language. This subject is discussed principally in section 6, but cannot be avoided at certain earlier stages. Judging by the general fact that final consonants, especially - $\eta$  need to be posited in EA but apparently did not occur in the CA stage, CA appears to be a later form of the same basic language as EA, but combined with elements of other origins. This statement rests not only on the study of Kroeber's maps (Kroeber 1923) but also on the mapping out of parts of Curr, volume IV, kindly done for the present writer by Mr Peter Newton, an honours student at Macquarie University, New South Wales. In some cases there is little or no common material at all to be picked out of Curr's lists, which consist of 63 words in 196 languages available at the time of his writing: allowance has to be made for inadequate phonology, but that can be done.

One such example is provided by a word for *mouth*, which is presumably da- often plus a second syllable which varies from area to area. It is found in Queensland and parts of Victoria, and in the south-west of the continent (which often has these prevaillingly

eastern words; even such a word as \*bura, *kangaroo*, which appears largely in Queensland, has cognates in the south-west).

An instance of what is being discussed is provided by the word for *eye*, which was established by Capell as EA \*miriŋ. It could be \*miliŋ, but at the moment it is the initial, not the medial consonant which is critical. In Queensland the word is widely dili. A change of m- to d- is unacceptable, because as a rule a peripheral consonant does not interchange with a central consonant. But it is hard to say more than 'as a rule' at the present stage. Moreover, there are instances found which point to \*mijiliŋ as a possible original, but this is a different question. The change of \*baduŋ, *man* to mari in Queensland is acceptable because it is only nasalisation of a peripheral consonant, but \*dili(ŋ) involves a different principle of change. At the same time the occurrence of two such similar forms with the same meaning is not impossible: this is what is meant by the heading 'The Puzzle of Root Establishment'.

Words for *egg* present a similar and more complicated problem. Capell restored it for CA as \*gambu(ŋ). The following, however, all appear to be forms of the same root: Walmadjari gambinj, Baljgu djambu, Mandjildjara ŋambu (all WD and therefore presumably CA forms) found in CY as \*gambu (Sommer 1969, after Hale). But the following also would seem to be forms of it: ba:m (Gabigabi), bambu (Jandruwanda), babu (Arabana), gabu (Waljwan), gabu-ga (northern Wiradjuri), bambu (Djirbal and Bidabida), Murawari gabun preserving the final consonant, so that although \*gambuŋ, the initial consonant remains completely uncertain and one is constrained to posit \*cambuŋ, the c- indicating an uncertain consonant. There are quite a number of these in Hale's restorations for Cape York, but they are not satisfactory. Even then there is a remainder including maga (Gaurna, Narangga) which does not seem to belong, and in western coast areas of Western Australia wala which seems even less suitable as a derivative. What then is the final establishment in such a case? Local endings also may be added: Wiradjuri gaba-ga contains the same suffix found frequently in Ngunawal as -gaŋ, as in Ngunawal miri-gaŋ, *dog* (\*miri widely in this region), and even found in pronouns such as Dharawal ŋa-ja-gaŋ, *I*, where it is superadded to the ergative ending -ja.

Roots for *water* present even greater variety, and it is interesting that Kroeber thought the following might all finally represent one root, water being such a universal necessity, especially to early man, that a single root for it is conceivable. Kroeber gives the following list:

1. gada, gala, gana, kun, goŋ, galan, gadini, gadja, gwadja - found in the north and centre, western Victoria, inland New South Wales and south coastal Queensland.
2. gama, gamu, gomo, gam, gumum, mostly in central and western Queensland.
3. gaba, gabi, gawi, gawara - WD, south-western Australia, Adelaide area.
4. ŋaba, naba, ŋogo, nogo, mugu - western New South Wales, south-western Queensland and north-eastern South Australia.
5. ŋadjun - New South Wales south-east coast.
6. baba north-west Western Australia, including Ngayarda areas.
7. baro, bari - southern Victoria, southern Cape York.
8. wara - Gippsland.

These seem to be too varied to be covered by any processes of change, yet almost any two of them can be pictured as arising from each other, given time and lack of communication. Nevertheless, no one theoretical original seems to be constructable, to cover all the presumed developments. The case must rest at present undecided.

A further point may be mentioned here: most established roots are bisyllabic, but a few such as \*ma, *take*, seem everywhere to be monosyllabic. This could belong to \*maŋ, *hand*, but there is no noun corresponding to \*ga, *hold*, so again no decision can as yet be made. A few other roots can perhaps be trisyllabic: \*mir/i/iŋ, *eye* appears in some areas in a form that would presuppose \*mijiliŋ: for CY languages \*mijil is suggested. This, too, must be 'held over' pending further study, and there are no doubt more than one other 'puzzle' of establishment.

### 3. STRUCTURE OF AUSTRALIAN LANGUAGES

#### 3.1. Establishing Historical Stages

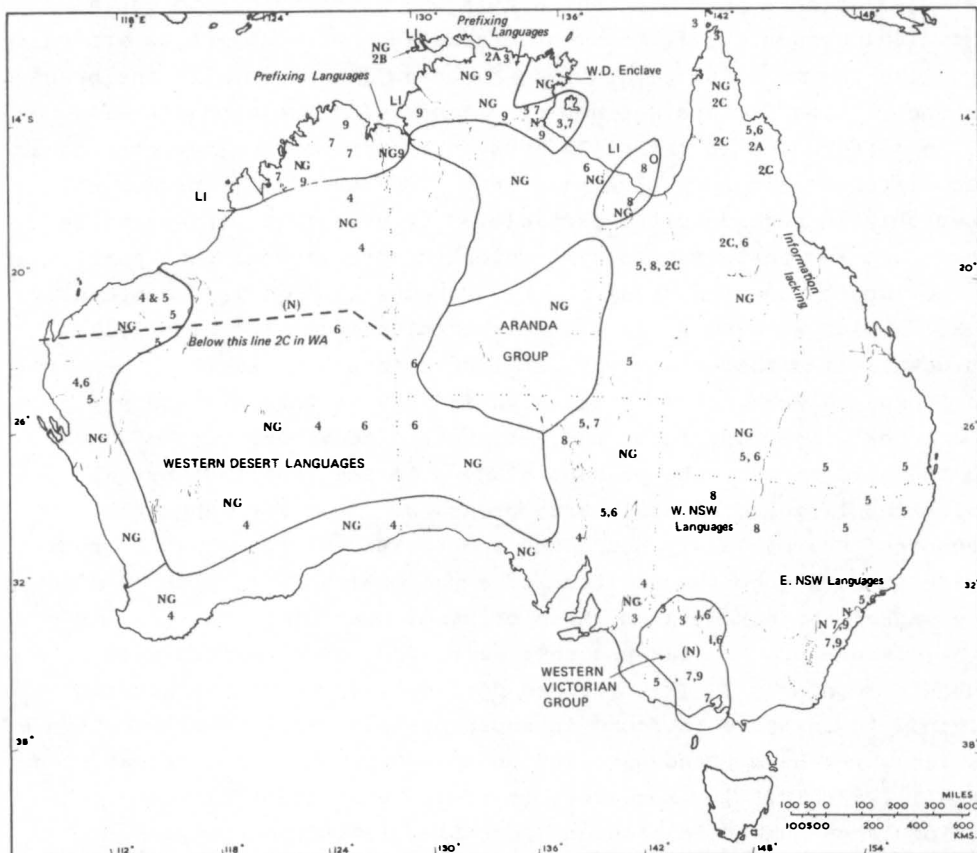
In this study, the unusual step has been taken of beginning an inquiry into Australian linguistic history with the pronoun and the pronominal system in general. The reason for this lies in the fact that pronominal roots as a rule belong to the oldest stratum in a

language. For Australia - as quite generally - this statement applies to the first and second person and, for special reasons, to the singular number and, apparently, the first person dual inclusive. In Australia, as in many other areas, the third person markers are not true pronouns but demonstratives and, in many cases, they express the relative position of the person or object referred to in regard to the position of the speaker. At the same time, there is often the difficulty that the pronoun, being so frequently in use, changes historically more than the noun and is therefore harder to use as historical evidence. It becomes abraded and more subject to irregularity, like the verb 'to be' in Indo-European languages. In the present instance, these factors are not so weighty, for the emphasis will be on the differences in principle between the pronominal systems rather than difference in morphological forms. Syntactic differences will enter only in regard to the part played by ergativity in Australian languages, and that is something which is more general than particular.

The importance of a study of the pronouns was realised especially by W. Schmidt when he wrote *Die Personalpronomina* (Schmidt 1919b); but detailed as that study was, it lacked important elements because the languages were not as well known in 1919 as they are today - some of the most important facts had yet to be discovered. One of these - and the beginning of the present study - is the fact that not all Australian languages contain true pronouns. In a few languages, 'pronouns' are basically nouns and are treated as such in the grammar. Person is marked by the addition of a personal suffix, plus or minus a case marker, to a noun stem whose original meaning is not usually now to be discovered. It was probably *self*, *body* or some such more concrete meaning. It is sometimes difficult to recognise such an origin. An instance is found in south-eastern Papua, where certain of the languages have pronouns based on an Austronesian root \**awak*, *body* (Capell 1943:210ff.). Moreover, it is at least doubtful whether EA distinguished number in pronouns, and the distinction between inclusion and exclusion of the person spoken to is not universal in Australia even now. The facts that are to be demonstrated in this section of the work are that

- (a) the earliest pronouns were derivatives of noun roots;
- (b) number was not part of the early pronominal system; and
- (c) the inclusive-exclusive distinction was not original.

These facts are all of importance in the linguistic history of Australia.



Map 2: Distribution of Pronoun Forms in Australia

LEGEND TO MAP 2:  
DISTRIBUTION OF PRONOUN FORMS IN AUSTRALIA

Main distinction:	LI	Language isolates
	N	Nominal basis of pronoun root
	NG	Common series <i>ŋa-/njin-</i>

The NG sets are borrowed into LI languages, and numbers placed inside LI areas therefore refer to the same facts as they would in NG areas. The NG sets are subdivisible as follows:

1. Simple forms.
2. Incomplete sets:
  - 2a No dual forms.
  - 2b 1st dual inclusive *ŋali* = *you and I* but no other dual persons.
  - 2c No inclusive-exclusive distinction in dual or plural.
3. Suffix *\*-badj* added to nominative or ergative base (not distinguished here).
4. Third person singular based on *\*ba:* in some languages other numbers are also so based or instead of singular.
5. Third person singular based on *\*nu*.
6. Third person plural based on *\*dana*.
7. A trial number is present.
8. Tense is marked in pronoun as well as in verb.
9. Syntactic combination of subject and object.

A similar development, or perhaps combination of originally disparate sources of the languages, is to be seen in the verbal system of EA languages: if there was no inclusive-exclusive distinction in the pronoun, neither was there (nor is there yet in some cases) any such distinction in the verb. Moreover, the verb did not originally mark person, and some still do not. It would seem also that number marking came before person marking. This is in keeping with the general fact that in Australia there has been continual complication rather than simplification in both phonology and grammar, unlike developments in some other parts of the world (see Tauli 1958).

This complication of verbal structure in Australia can be seen in remarks made by Capell (1972:8-10) on the three types of verb, although there is no parallel mention of pronouns in that paper. Moreover, these different formations are geographically scattered at the present day: verb uninflected for person and number is found in coastal New South Wales (Gadhang), the Lakes districts of South Australia (Diyari) and numerous other areas. Number without person indication is found in Central Australia (Aranda) and may be a local development; number and person differentiation is the commonest type in modern times. The special feature of the WD and some other languages that has been called 'Affix Transference' (AT), must also be studied and that too has historical significance.

### 3.2. Languages Lacking True Pronouns

The phrase 'true pronouns' is used in the sense of words that serve no other lexical purpose than to indicate speaker or person addressed. They are formed from a common base by the addition of suffixes marking person; these sometimes, but not necessarily, are used also to mark possession with nouns and person with verbs. Such roots can rightly be regarded as nouns, even though their original meaning is not known.

The first example is that of Ngunawal, New South Wales, a language spoken in the district now occupied by the city of Goulburn, and its northern neighbour Gandangara. These are listed amongst Schmidt's Yuin languages, specifically northern Yuin, and Kuri respectively. In this language, *I* is *gula-nga*, *you* is *gula-ndji*. The root \**gulaŋ*, *skin*, has already been given in section 2 as an EA word for *skin*; it has considerable spread, from Arnhem Land across Central Australia and into Victoria and New South Wales, as well as to parts of Cape York Peninsula. It seems to be a typical word of the 'central stream'. In some languages it is also the *bark* of a tree, and in Yidinj



*the human body*. The root varies between \*gulaŋ and \*julaŋ. In Ngunawal and Gandangara it has been narrowed down to become the index of personality, i.e. a noun stem carrying possessive markers to indicate the referent. Schmidt (1919a:101) also points out that in northern Kuri languages the differentiation of inclusive and exclusive in dual and plural is not found, and suggests that R.H. Mathews included it by induction without evidence in Darginjung - this may or may not be true.

The full set of pronouns in Ngunawal stands as follows:

Person	Singular	Dual	Plural
1. incl.	-	gula-ŋa	gula-n-banji
1. excl.	gula-ŋga	gula-ŋalu	gula-m-banji-li
2. excl.	gula-n-dji	gula-m-bu	gula-ŋu
3. excl.	ɟana	ɟana-djula	ɟana-djimalinj

It will be seen that this set includes both dual and plural number and the inclusive-exclusive distinction. This development will only have taken place in eastern Australia, for the CA languages occurring in the central and western parts of Australia will show cases in which inclusive-exclusive distinction is lacking, and in which *we two* is *I-two*, using for *two* not the EA root \*buladj but the CA \*gudara. It was method, not form, which the CA languages copied at a later date. The bulk of the development must therefore be sought in eastern Australia and in those parts of the west in which CA influence is least.

The Ngunawal pronouns of the third person are also of interest. As is so common in Australia, only the first and second persons rest on a truly pronominal base - and even these do not always do so, as is apparent in the Warnman and Ngunawal examples - whereas the third persons are mostly demonstratives, usable with or in place of nouns. The special point of interest is that the root \*ɟana is an EA root meaning *they*, which is usually limited to third person plural. Here it has been used as a third person without reference to number; it becomes a singular, to which dual or plural indicators are attached. This again points to an earlier lack of discrimination of number.

The above type of construction is found also in western Victoria as well as in New South Wales. In a considerable area of western Victoria

such pronounless languages are found, including Djadjala, Djabwaru, Dagwuru and some others. Here the systems are similar: a noun base with a possessive suffix is presumed; however, the noun is not a common noun such as \*gulaŋ, *skin* but varies from language to language, and the whole system is more involved. The following set shows the pronominal forms of Djadjala:

Person	Verb Markers	Non-verb Markers <sup>1</sup>
Sing. 1. incl.	-	-
1. excl.	-n	-eg
2. excl.	-r	-in
3. excl.	-∅	-ag
Dual 1. incl.	-(ŋ)al	-(ŋ)al
1. excl.	-ŋalaŋ	-(ŋ)alag
2. excl.	-wul	-wula
3. excl.	-bulaŋ	-wulaŋ

At this stage in the development of Australian languages therefore we find a lack of true pronominal forms. They are replaced by noun roots which have person reference added as suffixes. These references are made to first and second person only. The question of an inclusive-exclusive distinction is not discussed at this point for, in all the instances given here, such a distinction is either secondary or lacking. This would seem to be the remains of a very early stage of the languages. The variety of the forms given suggests that a pattern was present but not such common roots as would suggest a common proto-language. It is therefore likely that Australia will provide, not a proto-language, but rather a series of coeval but unconnected series of EA languages.

Moreover, even a dual number is not universal: Tiwi and Dampier Land present only first dual inclusive, *you and I*, though in Dampier Land later forms completing the dual have been involved. With these thoughts

<sup>1</sup>There are certain irregularities between verb and noun endings that cannot be reconciled: they may be due to Mathews' examples, as in final -aŋ and -ag in the dual, and -wul, -wula, -bulaŋ and possibly -bulag in the third dual. These are left unaltered: there is no call for final definition here. See Mathews 1902:71ff.

in mind, therefore, it is possible to consider some of the other identified non-CA groups of languages. As O'Grady suggests in this volume, it is almost certainly the fact that many early forms of language in Australia have perished without a trace except perhaps in odd words which it is no longer possible to identify as such inheritances. To these are added another set of suffixes covering trial and plural numbers (Mathews 1902:79ff.). Such markers are added directly to the verb, whereas the non-verbs to which they apply are nouns, possessives and object pronouns. The pronominal root is *jurw-* > *jurw-eg*, *I*, *jur-win*, *you* etc.; the possessive *jurw-aŋ-eg*, *mine*; *jurw-aŋ-in*, *yours*, and the objects *njaŋ-eg*, *me*, *njaŋ-in*, *you*. In all these, the independent pronoun based on *jurw-* is something quite different from the normal Australian pronoun, but parallel to Warnman *bara-*.

An example of a language in which a similar system is used but with another root is Djabwuru *baŋ-eg*, *I*, and Dagwuru *wa-n*, *I*, probably belongs here also: the EA root *\*baN*, *person* has already been discussed in the preceding section. In Djabwuru *baŋ-* takes the noun person suffixes *baŋ-eg*, *baŋ-in*, *baŋ-ug*, etc., but in Dagwuru *wa-*, which could be the same root, takes the verbal set, and the third person is given by another root *munji*. In none of the languages is gender involved in the third person. The set of forms in Dagwuru is as follows:

Person	Singular	Dual	Plural
1. incl.	-	<i>waŋ-al</i>	<i>wa-ŋaŋaŋjin</i>
1. excl.	<i>wa-n</i>	<i>wa-ŋan</i>	<i>wa-ŋaŋjinju</i>
2. excl.	<i>wa-r</i>	<i>wa-bu:l</i>	<i>wa-dgurabil</i>
3. excl.	<i>munji</i>	<i>munjibulabil</i>	<i>munji-gaŋan</i>

It should be added that there is also a trial number, formed by the addition of *\*-galig* of which there is discussion elsewhere (3.4). Such a trial is almost limited to western Victoria although there are a few examples in the far north and north-west of the continent, in the regions that usually show kinship to this south-eastern part of Australia. The trial marker is usually the final element of the compound: Djadjala *jurwe-ŋura-galig* and Djabwuru *ba-ŋadu-galig*, *we (incl) three*; the corresponding plurals are Djadjala *jurwe-ŋur-ag* and Djabwuru *ba-ŋadu-ag*. The trial is thus not really a pronominal

formation, and \*galig is simply 'a related group, small in number'.

The absence of pronouns (in the above sense) is not limited to eastern Australia; this is a fact that suggests the existence of an early stage of Australian language (perhaps EA<sub>1</sub>). The example to be called is Warman, a language geographically on the northern fringe of the Western Desert. Here the noun root is bara-, which serves in the first person singular for I, but carries suffixes for other persons and numbers:

Person	Singular	Dual	Plural
1.	bara	bara gudjara	bara waḍa
2.	bara-ḡgu	bara-ḡgu gudjara	bara-ḡgu waḍa

There is no third person - a demonstrative balawanin is used, with dual balawanin gudjara, and plural balawanin waḍa. Although, in the present state of knowledge, it is impossible to assign a meaning to bara, the construction by means of number markers, available also for other uses, is quite clear.

The bulk of Warnman grammar, however, has been 'taken over' completely by W.D. forms and grammatical elements - in fact it has been swamped by them. On the other hand, Warnman vocabulary stands quite apart from WD vocabulary except for a limited number of loanwords, examples can be seen in O'Grady 1956. This is clearly an example of an 'early' language which has almost given way before more influential later comers, as British gave way before Anglo-Saxon, and the western Celtic Manx has done and Gaelic is doing before English. So in Warnman we see the process of domination by a language of another type. In passing, the absence of a bara- third person corresponds to absence of a third person in the other early Australian languages. More will be said of this when the na-/njin (EA<sub>2</sub>) base language is treated *infra*.

### 3.3. Other Non-CA Groups of Languages

Until a language-by-language analysis is made, it is impossible to say just what Australian languages are EA, or to identify any level of EA - which is ultimately a matter of lexicon - but some pronoun systems can probably be diagnostic, especially those in Arnhem Land. Mention must be made of certain groups which obviously do not fit the patterns of EA or CA; these include the languages of the Daly River (DR) region,

those of Bathurst and Melville Islands (BM), and probably others which can only be worked out later, but certainly not in the present space.

### 3.3.1. Languages of the Daly River Area

The standard study of these at present is that of D.T. Tryon (1974), from which the material and some of the general remarks here are taken. Certain features may be listed which serve to establish the DR languages as a group in their own right.

Pronoun systems are quite different from those of the EA languages just discussed. For instance, those of Maridhiel can be shown as follows:

Person	Singular	Dual	Plural
1. incl.		ᵑᵑᵑᵑᵑᵑ	ᵑᵑᵑᵑᵑᵑᵑᵑ
1. excl.	jigin		gaᵑᵑ
2. excl.	nanj	} plural + bini	nadi
3. excl. masc./fem.	naᵑ		wadi

Here there are certainly strange forms, compared with those hitherto quoted, and quite distinct again from the set quoted as EA<sub>1</sub>. The existence of a set of plural pronouns is noticeable, as is the fact that there is a first person dual inclusive but, if other duals are required, they are built from the plural - making this earlier in time - by the addition of a dualiser (bini) which is quite different from the numeral *two* (djidjiguni). Although the language has noun classification, there is only one third person pronoun, and the plural non-first person carries a marker -di. Tryon (1974:296) remarks: 'There are exceptions, notably in the Tymeri group, where separate plural and dual forms exist in all persons. In this case also, it does appear that the dual series is derivable from the plural. Marengar is the only language within the Daly family which has truly separate dual and plural forms for all persons'.

At least, therefore, the 'Brinken' group is something apart from the others, even within this limited region. It would appear also that the occurrence of only one dual pronoun - first inclusive - marks the BM group also, and seems at least a likely situation in the

Dampier Land languages (3.3.3.). Yet in spite of all this, there appear to be EA forms in the direct object pronoun suffixes (Tryon 1974). These, however, are phrase-final suffixes in VP, where the plural *ṅaṅinim* can be broken up into *ṅaṅgi-nim*, and the dualiser *-bini* superadded, as in Maridhiel:

kiriṅki-            - $\phi$ -tim- pini-ya    tyuwuṅanan  
*we/excl/hands-him-bury-dual-past yesterday*  
*We two buried him yesterday.*

(Tryon 1974:77). This is in some ways comparable with Tiwi usages, but not with that of the rest of Australia.

Amongst the pronominals, there are five different dualisers, having no agreement among themselves or with EA or CA. Verbal systems in these languages have very little in common with the rest of Australia, but seem to be *sui generis*. See the paper in this volume on verb classification in Australia. As remarked above, these languages are also noun-classifying, but again their systems differ widely from those of other north Australian languages: see the corresponding paper on this subject, and Tryon (1970).

On the level of vocabulary also there is wide divergence from the rest of Australia, to a degree that still awaits analysis.

In the summing up, structural features unite to make these languages a distinct group. Tryon (1974:286) says of them: 'While the DR languages may appear to constitute a fairly loose-knit unit when viewed in terms of percentages of shared cognates, a comparison of phonological and morphosyntactic features reveals many important characteristics common to all of the member languages of the Family. Several of these characteristics, especially those involving verb morphology, appear to be restricted to the Daly Family, within the north Australian area'.

### 3.3.2. The Tiwi Language of Bathurst and Melville Islands

Tiwi very obviously stands apart from the majority of Australian languages, whether geographically close or not. In vocabulary the proportion of CA is very low - about 8%. Non-CA vocabulary makes no better showing amongst the other languages of northern Australia, in which CA is still very small, but in excess of the Tiwi percentage. There are also Malay components such as *kumis*, *beard*, Tiwi *kumuti*. The general impression was pointed out by Capell (1940 and 1941) and also by Osborne (1974) in his fuller study. In this he speaks of the extraordinary complication of the morphosyntactic level, and writes:

'The Tiwi verb is a sentence in miniature', and 'nothing quite like it is found anywhere else in the Continent or on the Australian islands' (Osborne 1974:2-3). Apart from the remarkable agglutinating processes, 'most striking of all (for an Australian language) is the capacity which Tiwi has for incorporating noun-like forms into the structure of the verb, principally as direct object'. These structures may indeed be 'sentences in miniature', and they follow an SOV pattern, but still remain unique for the continent. If they represent a straight development from a primitive Australian pattern, it is still something local, not common. Osborne then goes on to make it clear that Tiwi is still an Australian language, however unique, but he is unable to 'place' it among others; it is also clear that lexical comparison is unable to establish Tiwi's genetic relationship (see Osborne 1974:3), especially the rapid replacement of vocabulary for sociological reasons. It remains to be seen whether his pessimism that 'Tiwi's genetic relationships will never be established through lexical comparison but only through structural comparisons' yet to be undertaken, is justified. On Tiwi vocabulary see 6.3.1. below.

Nevertheless, certain things do stand out. First is the fact that the dual number is marked only in the first person: *muwa*, *you and I*. Secondly, there are plural pronouns, and a third person with masculine and feminine distinction. This recalls Daly River and Dampier Land (except for gender distinction which is absent from the latter).

The Tiwi pronouns are:

Person	Singular	Dual	Plural
1. incl.	-	<i>muwa</i>	<i>ŋaya</i>
1. excl.	<i>ŋija</i>		<i>ŋawa</i>
2. excl.	<i>ŋinda</i>		<i>nuwa</i>
3. excl. masc.	<i>ŋara</i>		} <i>wuta</i>
3. excl. fem.	<i>ŋira</i>		

The crucial first and second person singular are obviously EA forms, and the second person plural also may be fitted into the scheme, but the remainder cannot; moreover, the prefixed person markers, which may be older than the cardinal pronouns, are different, except for first person singular *ŋ-*, and these vary for tense (Osborne 1974:38ff.).

They therefore have a non-Australian background, or at least one that differs from the domonating EA.

Without therefore expanding the treatment at this stage, it is probable that this represents still another type of EA, of limited local occurrence. That any further delineation is possible, granted that the amount of vocabulary change has been as Osborne suggests, seems unlikely - although, of course, further vocabulary study may change the outlook.

### 3.3.3. Dampier Land Languages

It has long ago been shown that Dampier Land (DL) languages stand apart from their neighbour (Capell 1956/1962) in having a regional vocabulary and considerable grammatical peculiarity. For Njigina and Warwa, more details are given in Capell 1953. In Warwa, there is considerable influence from the NK languages. Structurally, these languages are largely prefixing: the person of the verb is marked by short pronouns prefixed to the verb stem and varying for tense.

Although the pronouns themselves (see Capell 1953:453) are partly EA, based on \**ŋa-* series, they have the peculiarity that the dual contains only the first person inclusive *you and I* - thereby agreeing with Tiwi and some other languages. Such a characteristic may be classed as EA - the earliest forms, treated above, though primitive in being noun stems, are later in adding suffixes for all dual persons. This development has been plain in Victoria, where even a trial number developed.

The following set shows DL pronoun roots, as theoretically reconstructed from Njulnjul and the other Peninsular languages, Bard, Djawi, Njigina, Warwa and Yawur.

Person	Singular	Dual	Plural
1	<i>ŋaju</i>	<i>jawu, jaju</i>	<i>jadiri, jarada</i>
2	<i>djuwa</i>		<i>gurer, gura</i>
3	<i>ginjɪŋ(a)</i>		<i>jir(ga)</i>

These forms are idiosyncratic, except for the first person singular, which belongs to the \**ŋa-* series of EA pronouns, to be treated below (3.4.). Unexpectedly enough, it is the third person singular that is of interest here: *ginjɪŋ(a)* has been linked by Dixon (1972:258) with



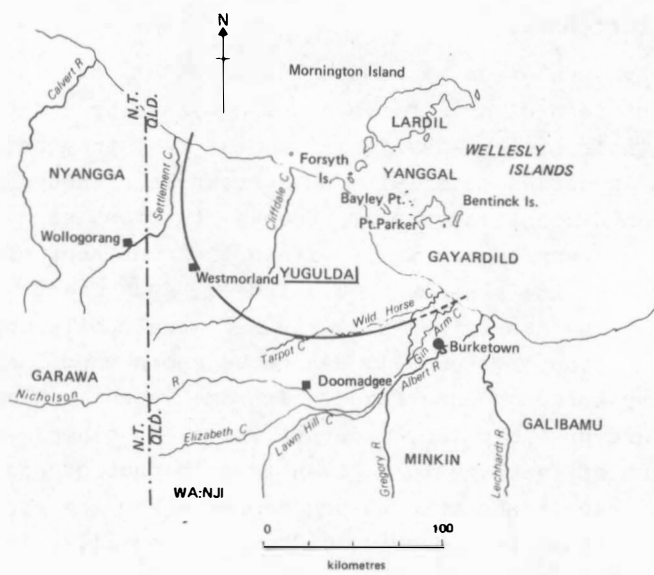
a root \*ginja, found not only in Djirbal and Wembawemba (western Victoria) but also in Njigina. He has pointed out a few other east-west resemblances also, e.g. DL -naru, *like*, gi, *near*, linking with Lardil gin and Mbararam ĩini, *there*.

It may be remarked in passing that the vocabulary contains much that is peculiar, whereas a CA content is difficult to recognise as anything more than a 'contact borrowing'. From the 100-word list used to calculate such content only a half-dozen words were accepted, and some of these only in some of the languages. Aspects of this vocabulary are discussed below in 6.3.3.

#### 3.3.4. Other Areas

Not only such areas as Dampier Land but all over Australia there are more or less divergent types which cannot be dealt with here in detail. Their present-day forms suggest that they began as forms of EA and had received material from surrounding languages or, in some cases, even distant languages. Such a statement suggests that there have been widespread movements within the continent of which there is no evidence at the present time. Indeed, such events are very likely seeing that the Aborigines of Australia were mobile until white immigration stopped them. It cannot be known when language areas or tribal territories became fixed. In some cases such changes of location are probably very modern. One clear example of this sort of replacement of language in a given area is that of western Arnhem Land, where J.K. Harris was able to produce maps showing earlier and present linguistic situations (Harris 1969:maps I and II). Another is the Pilbara region of Western Australia, for which von Brandenstein (1967: 20aff.) produced seven maps of tribal movements - all of them modern enough to be still known, yet indicative of movements that must have gone on in more ancient times on a larger scale. The present-day linguist is at a disadvantage in regard to all this, and can only try to restore such movements by comparison of the existing languages with each other.

Nor are all the languages pronounless, like those discussed earlier. In addition to the language mentioned above, there are some which have taken over, at least as subjects and sometimes with suffixes in the oblique cases - pronouns of the EA series (ĥa-, njin-), retain strange vocabulary and strange forms of suffixed pronouns, and seem to retain old grammatical structures, especially in their verbal systems. The latter are extremely divergent from the languages used



Map 3: The Yugulde Language - Gulf of Carpentaria - in relation to its neighbours (after Sandra Keen, 1972)

in other parts of Australia, not only in the morphemes used for the grammatical features, but also in the underlying principles. Examples of these will be found in Yugulda, Garawa and Galgadungu of the Gulf district of Queensland.

### 3.3.4.1. Yugulda, Garawa and Galgadungu

In each case, the pronouns can be fitted into the more widespread Australian, even though they have strange components:

#### 1. Yugulda

Person	Singular	Dual	Plural
1. incl.	-	ŋagura	ŋagulda
1. excl.	ŋada	ŋara	ŋalda
2. excl.	ŋjingga	gira	gilda
3. excl.	niya	bira	bilda

Here it is obvious enough that the singular pronouns are of EA origin; the other numbers are built with dual ending *-ra* and plural ending *-lda* on other roots: and the third person links with the Northern Kimberleys, e.g. as seen in Ngarinjin *bi-ra*, *bi-ri*, *they*, whereas the second person *gi-* root recalls the Ngarinjin prefix form *gur-*.

#### 2. Garawa

Person	Singular	Dual	Plural
1. incl.	-	nungala	ŋambala
1. excl.	ŋayu	ŋali	nuru
2. excl.	ŋindji	nimbala	nari
3. excl.	njulu	bula	yalu

Here the combinations are more elaborate: *ŋayu* is the normal ergative but, in this case, is not necessarily ergative at all; *ŋindji* is also ergative in form; *njulu* is found, for example, in South Australia (Diyari); *bula* is EA \*buladj, *two*; *nimbala* recalls (but not certainly)

the WD *njun-bala*, *you-he*; *nuru* is usually second person plural and *nambala* seems to be *I-they* or perhaps *I-he*, whereas *nari* and *yalu* remain opaque.

### 3. Galgadungu

Person	Singular	Dual	Plural
1. incl.	-	ŋali	ŋada
1. excl.	ŋay	-	-
2. excl.	ŋini	mbaya	nudu
3. excl.	laa, bagi	buyu	dina

This set is very difficult to analyse. There is no inclusive-exclusive distinction in the first person dual and plural; first and second person singular are recognisably EA; second plural recalls Gunwinjgu *ŋuḏa* which is both singular and plural, and has cognates in Victoria (Wembawemba etc.) and *dina* seems to be a form of EA \**dana*. The other forms remain quite strange.

It should be added that the vocabularies of all three languages differ radically from each other, and their percentage of CA and even EA words seems to be almost negligible. The 100-word list has been provided here to show that from the view-point of vocabulary there are three language isolates. The existence of such isolates is part of the argument that there is no one proto-language 'Australian' or even EA or CA that is basic to the whole continent. Words at present recognised as CA or EA are added in a final column for comparison, showing that there are extremely few of these present in the languages under discussion.

English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>ashes</i>	djulguwa	djolorina	bumba	
<i>bandicoot</i>	wadunda	galgdadu	biwali	
<i>bark (n)</i>	galuwa	ŋiŋir		
<i>bathe</i>	gu:dja	wagadaba	djara	
<i>beard</i>	duganda	djamoga	janbad	ŋanga(r)
<i>belly</i>	badaga	mowa	buru	
<i>big</i>	badanu	walgora	jawn	bulga, bunda
<i>black</i>	ŋumuwa	gogodo	madjin	mawRu, maLu
<i>bird</i>	bu bu ulu	djolagi	duruun	
<i>blind</i>				
<i>blood</i>	ganduwa	ŋolja	ulei	
<i>blow</i>				bu-
<i>bone</i>	djulda	ŋoli	gunga	darga
<i>boomerang</i>	wanaga	ŋobongo	jalgabari	gali
<i>breast</i>	kundunga	ŋamolo	mimi	ŋaman, bibi
<i>burn</i>	ganadja	jondidjba	duwi	gamba
<i>bring, take</i>	djirmadja	gojo	mani	

English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>camp</i>	nada <u>R</u> a	bandari	muu ( <i>earth</i> )	ɲura
<i>cloud</i>	man <u>a</u> nda	ɲalo	juruma	
<i>come</i>	waradja	badadjba	iɲga	
<i>crow</i>	djad <u>a</u> rga	wangola	wagala	wagura
<i>cry, weep</i>	l <u>i</u> gigaradja	ɲindoga	luɲa	
<i>die</i>	bugu <u>w</u> aɖa	djanjba	uli	
<i>dog</i>	ɲawuwa	badjaɲo	ɖugu	
<i>drink</i>	gu <u>d</u> amadja	naRaba	aili	
<i>eaglehawk</i>	djarbaga <u>l</u> a	djalbaramba	ulujan	
<i>ear</i>	maralda	gowaDa	<u>i</u> nda	binanɲ, guRu
<i>earth</i>	ɖu <u>l</u> ga	djamba	muu	ɲuranɲ
<i>eat</i>	djiyadja	djarba	aili	da-, na-
<i>egg</i>				gambu
<i>emu</i>	djad <u>a</u> bu	gaNaɲandja	udiɲad	ɲuninj
<i>excrement</i>	ɖu <u>l</u> da	mirda	unu	gunanɲ
<i>eye</i>	mibu <u>l</u> da	yami	m <u>i</u> ldi	miliɲ
<i>fall</i>	ba <u>l</u> didja	wirba	ɲui	

English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>father</i>	gand <u>a</u> du	bogaganja	gula	
<i>fire</i>	ŋida	djaŋo	udjan	waru
<i>fish</i>	yag <u>u</u> li	gago	wagari	gwijan
<i>fly (n)</i>	ŋirŋuda	goNima	yumumduru	
<i>food</i>	wu <u>l</u> anda	mama	maa	maji
<i>foot</i>	djara	nogami	<u>d</u> abandu	dinaŋ
<i>give</i>	wu:dja	wadjba	anji	(w)u
<i>go</i>	waradja	balba	gaandja	jan
<i>good</i>	miraRa	gonjba	burur	
<i>hair</i>	bulda	njoŋga	warabu	
<i>hand</i>	ma <u>l</u> da	maNi	magadi	maRaŋ
<i>head</i>	nalda	goladji	gan <u>d</u> a	gada, walu
<i>hit</i>	bal <u>a</u> da	daba	<u>l</u> ai	bu-
<i>hot</i>	ŋaraŋara	ŋaraŋara	bujud	
<i>hungry</i>	ŋamanda	birgalidjba	bai	
<i>kangaroo</i>	bi <u>d</u> iriga	walidji	madjumba	
<i>know</i>				

English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>leaf</i>	dj <u>i</u> ndiya	wandjir	bul <u>i</u> ndi	
<i>liver</i>	garmida	djanayi	udundu	
<i>long</i>	yulmbura	wonanjbala	ulguuri	
<i>make</i>				
<i>man</i>	dangara	nananji	juru	baNbuŋ
<i>many</i>	mu <u>d</u> ara	goDogodo	mal <u>d</u> a	
<i>meat</i>	yalbu <u>d</u> a	banganji	adi	minja
<i>milk</i>				
<i>moon</i>	waldara	yagal	dunda l	gagari
<i>mother</i>	ŋam <u>a</u> du	ŋada	ma <u>d</u> u	
<i>mouth</i>	wal <u>a</u> ra	djanji	an <u>d</u> a	dagan
<i>navel</i>				
<i>neck</i>	du <u>w</u> ura	doga	galaa	
<i>no!</i>	walira	migo	gunaan	
<i>nose</i>	girga	molo	idjindji	muraŋ
<i>one</i>	djad <u>a</u> ra	yina mali	ajad	gudju
<i>rain</i>	wunda	djandja	guu	galini?
<i>road</i>	wayi <u>n</u> i	yobal	waru?	
<i>run</i>	djawidja	wilgo	duna	



English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>sand</i>				
<i>see</i>	guridja	nadjba	nanji	na, nja-
<i>skin</i>	doraRa	wadjolgi	wagu	gulaŋ
<i>sleep</i>	mindalidjada	golodjaridjba	nuu	(lie down)
<i>small</i>	gunyaRa	bayagaDa	minanara	djulaŋ
<i>smoke</i>	njuraRa	goŋgar	bulu	buyu, buriŋ
<i>snake</i>	dura	miya	duad	
<i>speak</i>	gaburidja	yandjba	bunbadi	wanga
<i>spear</i>	miyalda	woni	jugu	guridada
<i>spearthrower</i>	murugu	odjola		
<i>stand</i>	daldidja	garindja	naa	ŋaRa
<i>sit</i>	di:dja	djongo	naRadadi	
<i>star</i>	guRuba	warawidji	djirga	biNDiri
<i>stone</i>	gamara	doŋala	ndia	badu
<i>sun</i>	warguwa	gamba	wanaga	djindu
<i>take</i>	gurgada	goyo	mani	ma-
<i>throw</i>	nuḍidja	raŋimba	iḍidi	

English	Yugulda	Garawa	Galgadungu	CA (where known)
<i>tongue</i>	djalŋaŋa	djalinjɪ	mali	dalaŋ
<i>tooth</i>	ɗamanda	mayi	adinda	
<i>tree</i>	ɗiwalda	goŋDa	gunga	yirara
<i>two</i>	giyarŋa	godjara	luadi	buladj; gudara
<i>water</i>	ŋuguwa	ŋowo	guu	ŋugu, gabi
<i>urine</i>	gunbugu	ŋodjalo	gulgai	gumbu
<i>what?</i>	ŋaga	wanjɗja	ŋaga	minan
<i>when?</i>	djinamuLun			
<i>who?</i>	ŋaga	wanji	ŋani	ŋana
<i>woman</i>	maguwa	djibari	marabai	
<i>yes</i>	ŋi	yogo	ŋaa	
<i>you</i>	ŋini	ŋindji	ŋiŋga	ŋjin-
<i>you &amp; I</i>	ŋali	ŋali	ŋara	ŋali

Linguistic structures are present in each of these languages which set them apart from the normal Australian types of EA and CA. Comparison may be made here with the EA and CA forms by anticipation, details of which will be filled in later.

Word order is still rather free: SVO and SOV are much interchanged; what gives the impression of strangeness in these languages is the application of morphological particles within the sentence rather than the syntactic patterns. Each of the languages combines morphological markers in an unusual manner, which it is hard to take as local variant of such markers, even when they have cognates in CA or EA - and in many cases they do not!

Yugulda, unlike some of the neighbouring languages, is ergative, but its nouns have a set of nominative endings which appear even when nouns are given in isolation. Yet these are not noun classes in the sense in which the term is generally found in Australia (see the paper on noun classification in this volume). The endings are phonologically not semantically determined, and there are eight of them. Case endings either replace these suffixes or change their form to allow for them. There is also a set of case endings which is partly influenced by the stem final of the noun; the genitive case is itself capable of taking further inflection under certain circumstances.

It is differentiation such as this plus an almost complete difference in vocabulary from CA that suggests that here we have one of the layers of EA that underlie the modern situation.

In Garawa the structures differ somewhat, but do point to a similar conclusion. References to this language are based on Christine E. Furby's paper (1972). She summarised the marks of this language, stating that 'eleven distinctions of person and number are marked in personal and possessive pronouns....' Unusual features of Garawa pronouns are the ability of personal pronouns to be marked for aspect, mood and tense, and the ability of demonstrative and interrogative pronoun stems to take further suffixation and their function as different parts of speech. This language is also ergative, indicating that the phenomenon reached it at some date after settlement into its present situation, for it is an area bordering on the accusative language and there is every evidence that it was once such itself. Word order also seems relatively free - another marker of early linguistic date. It is noticeable that the verb in Garawa is frequently unmarked, as in Yugulda and Galgadungu, owing to the tense marker appearing in some other part of the utterance, usually in the head complex, whether noun or adverb, as illustrated in the examples of

Yugulda. In Garawa, the tense marker tends to remain on the verb, but the verb appears first in the sentence, e.g.

wilgu-yi wajga nanama                      ḡaninji  
 run-past down that (nonspecified) man-nom.  
*That man ran down the hill.*

as against

wanji-ḡanji              njuli              baDadjba  
 interr-subj:benef he:subj-past come  
*Why did he come?*

The third language, Galgadungu, is also to be grouped with this early stage of Australian, as some part of EA, and certainly earlier than CA. Vocabulary alone would suggest this. The information for this rests on Blake (1969).

Part from the marking of tense in the NP as well as in the VP, it is the verbal pattern which chiefly differentiates these languages from other Australian languages, not only in method but in the actual morphemes. Tense markers depend on four factors: transitivity, aspect, and realis and irrealis forms of the verb. Moreover, the transitive is marked within the body of the verbal complex, not by an ending or set of person markers, but by a marker which indicates transitivity as such and forms one item within the verbal complex.

The tense markers given in the grammar (Keen 1972:199) are as follows:

Table 9: Verb Markers in Yugulda

	Transitive			Intransitive		
	Present	Future	Past	Present	Future	Past
Realis	-ri	-nti	-nta			-(y)inḡka
Irrealis	-(ti) -ḡka(ti)	-yi- -inḡki	-nti	-(ti)- -ḡka(ti)	-yi -ḡki	-(y)inḡki

The problem then to be solved is the order of such suffixes in the total verb complex, and this is a point at which not only Yugulda but other languages part from normal Australian usage. A few examples from Keen (1972:200ff.) show this effect: Keen's spelling has been retained for these examples:

tlyatja-ŋa- ri wulanta  
*eat-Vtr-I (tr)-pres-food (nom)*  
*I'm eating food.*

(and the noun endings -tja and -ta come into play)

walira-ŋa-yi kapaŋa ŋum-aninjtja miya!injtja  
*neg-I (intr) find-fut-Vtr your-benef spear-benef*  
*I will not find your spear.*

There is a full study of these peculiarities in McConvell 1976 which will repay detailed study, and they show that here is a question of a variant linguistic type, rather than modification of a general Australian type. Some of the many variations which appear include

$$\text{Sentence} = \begin{cases} [\text{N-erg}] + [\text{Tr-pres}] + \text{N (nom)} + \text{V} \\ [\text{neg-intr-pres}] + \text{N (nom)} + \text{N (dat)} + \text{V} \\ [\text{dem (nom)}] + [\text{N (nom)} + p_1 + p_2 + \text{ta}] + [\text{pron (obj)} + \text{Vb}] \end{cases}$$

What is more unexpected is the use of ergative and nominative: objective does not always mean 'accusative': some other case may be required in some instances, as reference to McConvell's analysis will show. This language can definitely be set down as a different type, not as a variation on EA or CA models. At the same time, it is an AT language, but the AT processes are by no means the same as those of the WD languages or other CA languages.

The radical separation of certain groups of languages in Australia is stressed by O'Grady (1966:120) in his setting out of a density matrix between twentyseven Western Australian languages. The result is a very low density display. He remarks in the discussion of these languages that 'The results of the comparison of Nyulnyul, a non-Pama-Nyungan language spoken in the Kimberley District of Western Australia, are included by way of pointing up the extreme dearth of cognates (or rather, putative cognates) shared between languages of different phyllic families of the postulated Australian Macro-phylum. In fact, almost the only convincing cognate in many such comparisons turns out to be the first person singular pronoun, with initial syllable /ŋa/ in the vast majority of Australian languages'. This complexity of origin is largely increased when the scope of comparisons is increased. For the moment, it is time to pass on to consider the ŋa- set of pronouns. Before this is done, however, three other rather exceptional languages need to be passed under review, all of which use the root ŋa- for *I*. These languages are Lardil, Bidabida and Gurnu (Guṇu).

## 3.3.4.2. Lardil, Bidabida and Gurnu

Outside the immediate sphere of these three languages there are three others in which tense is shown in the pronoun and noun object, but in which the syntax is not as elaborate as in the other languages. These three are Lardil of Mornington Island, Bidabida (Pittapitta) of Boullia district and Gurnu (Guṇu) west of the Darling River in New South Wales and, to some lesser extent, Murawari not far from Gurnu. The principle of indicating tense in non-verbal categories is common to all these languages (Wurm 1972:133,146) and is not found in other parts of Australia. As the shared vocabulary both between the languages shown above and these others is small, and their CA/EA content is also very small, these look strongly like an early language group (EA) later flooded by eastward moving peoples. It is of course possible that each occurrence of this phenomenon was independent of the others, yet hardly likely, especially as the future marker is the EA \*-gu, indicating purpose - 'for' with nouns and 'intention' with verbs (see Blake et al., in Dixon, ed. 1976:421-82) in two out of the three languages. These languages will be reviewed briefly:

1. Lardil is the language of Mornington Island, to the north of and clearly related to Yugulda and Gayardild. Here object NP is marked for the future as against the non-future. The examples below are from Hale 1970; others may be found in Capell 1942:47-50. In the citations from Hale his spelling is kept:

ṭaṅka ka-ṅkuṛ piṛṅen-kuṛ  
*man speak-fut woman-fut*  
*The man will speak to the woman.*

Here the future marker -ṅkuṛ is added not only to the verb but also to the following noun. There is no ergative, and it is possible to turn the sentence into the passive voice in ways that are not relevant here. Further examples from Hale (1967:63ff.) will make the correspondences clearer:

nata kupaRi-kun ma:ṅi	nata kupaRi-ṭu ma:ṅ-ku
<i>I made a spear</i>	<i>I will-make a spear</i>

Word order in such sentences is not fixed; all possible orders are acceptable provided the requisite endings are in their places: Hale has shown the variations that are possible (p. 67). The pronouns then take on the following forms in the singular (Capell 1942):

Person	Subject	Object	
		Non-future	Future
1	ɲada	ɲida-n	ɲida-nda
2	ɲjɲgi	ɲimbe-n	ɲimbe-nda
3	ɲija	niwe-n	niwe-nda

The pronouns themselves belong to the EA set ɲa(n)-ɲjin, but the point of interest is that the objective second and third singular seem to involve the forms suffixed by \*badj (here becoming -we-) which will be discussed in 3.4.

2. Bidabida - information is gathered from Blake and Breen (1971), the authors' spelling again being retained. The situation is a little more complicated as there are dialect variations within the region. Moreover, the language is ergative, so that three forms of each pronoun appear: nominative, ergative (operative) and future. In the singular number these forms are

Person	Nominative	Ergative	Future
1	ɲanjtja	ɲaɽu	ɲanju
2	inpa	intu	inɲu

It will be seen that the -\*badj ending appears in inpa, the nominative, not in the objective, as in Lardil. The ergative in each case belongs to the -\*lu series. A series of case endings adds to the difficulties in Bidabida, e.g. the objective is

Person	Non-future	Future
sing. 1.	ɲanja	ɲanjtju-ku
2.	ina	inku

whereas the dative does not distinguish tense, but has ɲanjaɾi or ɲanjai for me; inkaɾi or inkai for you. All these forms are in radical

agreement with Lardil, but it would appear that Gurnu is radically different. A few sentences will show the system at work:

tjuarri-lu țarria piauall̩na  
*tall-erg kick-pres dog-obj*  
*The tall one is kicking the dog.*

kaṇa-lu pițika matjumpa-na tjiratjira-lu  
*man-erg kill-past kangaroo-obj boomerang-instr*  
*The man killed the kangaroo with a boomerang.*

maRa- ṇu ṇanu pițal̩ṇa  
*hand-fut I-fut hit-ting-for*  
*I'm going to hit him with my hand.*

It is possible to have more than one simultaneous case-ending:

țința- ma-ṇa kanta-nja  
*yam-for-obj <she> went*

3. Gurnu was recorded by R.H. Mathews as being spoken on the west bank of the Darling River, near Bourke in New South Wales, and links with Murawari just to the north of it. Neither has been fully studied since, but some work has been done on Gurnu by Wurm (1976), and Oates has done unpublished work on Murawari. The present writer, going through Oates' field notes, had observed the non-verbal tense marking phenomenon there also. It appears also further west in Ba:gundji (Wurm and Hercus 1976). The great difference here is that the tense is indicated by a variation in the *initial* consonant of the pronoun, not by a suffix to it. A few sentences may be quoted from Wurm (1976):

mu:ya waḡu winbaR- ayi-na  
*scold past-I daughter mine-loc (and I said to her)*

windu gaba-nja maḷi-uma ...  
*past-thou follow-cont man-yours ...*

gaḡu ḡayi wanga  
*future-I eat meat*  
*I will eat the meat.*

maṇḡi-na ga:ndara bami ginđu  
*ground-loc blood see fut-thou-ag*  
*You will see the blood on the pavement.*

Wurm adds: 'In the Barundji dialect of the Darling Group, the subject markers are suffixal and undergo morphophonemic changes. Nevertheless,



the changing of pronouns for tense is present in that dialect as well as will be shown by the following examples:

duḷaga giḍi:ga (< giḍu-iga) wimbadja-Ru  
*bad fut-this-pl man agent*

balga-nda:-di:ga (< balga-nda-gadi-iga) ḡali-ḡa  
*hit, kill-?-fut-they-pl we two-obj*

*Those bad men will kill us two.*

In these languages the tense marking is prefixal throughout: the normal \*ḡan/njin sets with their nasal opening being replaced by a w- set for the past and a g- set for the future tense. Here also it is a full declension substitute, e.g. Murawari *wunḡa*, *him* past, with suffixal form -(m)ba, *he*.

In these areas too, some of the older Australian words are found, e.g. Murawari *wi:*, *fire* < \*wiyin, a south-eastern root chiefly, of EA origin; g(w)ija, *fish* < EA \*ḡwijaḡ; ma-ra, *hold, take* < EA \*ma-.

### 3.4. The EA ḡa- Series of Pronouns

Next comes the set of pronouns resting on the bases \*ḡa<sup>(n/j)</sup>, *I* and ḡun- ~ njin-, *you*. The third person varies, mostly \*ba or \*dana, with originally undefined difference, but \*ba finally settling down to singular and \*dana mostly to plural. These are by far the most widespread in Australia, and in the author's earlier writings (1956 onwards) they have been treated as CA. Present evidence makes it doubtful whether they can be more than a type of EA, and in this case, the nominal roots used as pronouns in the ways just discussed would be an older stratum, so far conjoined in EA. It must be remembered that EA need not be regarded as a single stratum, so that the noun-pronoun roots could be EA<sub>1</sub>, and the ḡa- series EA<sub>2</sub>.

The ḡa- series is fuller than the EA<sub>1</sub> series (in the sense just defined), and may be tentatively restored as follows:

Person	Singular	Dual	Plural
1	ḡa <sup>(n/j)</sup> -	ḡali	ḡa-nan
2	ḡun- ~ njin-		ḡura
3	(ba)		(dana)

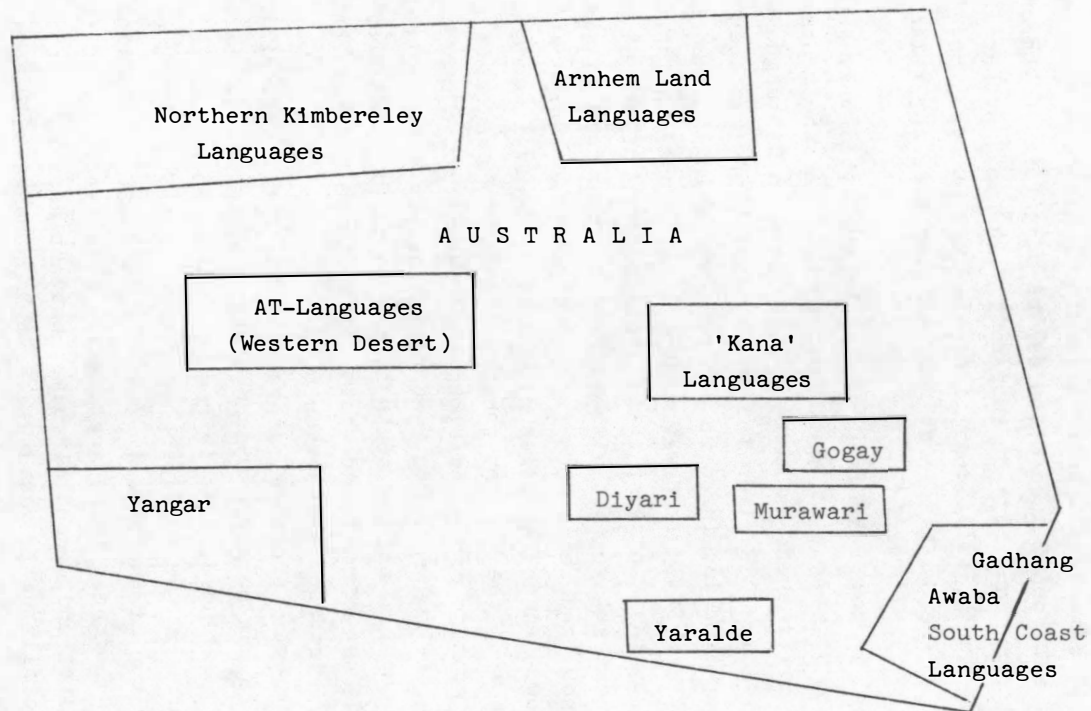
That this series may historically have overlapped with its predecessor is clearly suggested by the Gadhang, New South Wales, set, as delineated in Holmer (1966:61-3): in first person alongside nom. *ḡaduwa* is found obj. *baRaḡaḡ*, poss. *baRaba*, dative *baRay(i)* and, for that matter, second person sing. *biyay(i)*, parallel obj. *biḡaḡ* and poss. *bi:nba*, while *njuwa* is third sing. and *baRa* third plural - a type of confusion not present in the neighbouring Dhanggadi. In the languages of the Yaralde Group along the lower Murray, *ḡur-*, *ḡura* has become second singular.

In general, however, throughout large parts of Australia, the *-r-* has been a marker of plurality in the pronouns, as in Awaba *nu-ra*, *you* and *ba-ra*, *they*; the dual number is first person *bali*, second *bula*, third *bul-wara*. Again, these peculiarities of the extreme south reappear in the Northern Kimberleys and some languages of Arnhem Land. In Gunwinjgu *ḡuḡa* is *you* in all numbers, and fourteen other languages of the area have a similar *-r-* formation in the second person plural pronouns. Nor is it confined to these groups; Diagram I shows the distribution of *-r-* as a pluraliser throughout the continent and, in fact, it occupies all the strategic points of the country. More is said of this at the end of the present section.

The majority of Australian languages use pronouns which are based on these roots. In ergative languages the first two pronouns - the only original pronouns - take the form of *ḡaju* ~ *ḡadju* and *jindu* ~ *njundu* respectively and one of two roots - *ba-lu* or either *nulu* ~ *njulu* or *nu-wa* ~ *njuwa* for third person singular. The *ba-* root is western, the other *nu-* root mostly eastern. This in the form *nuwa/njuwa* is *\*nu-badj* and belongs to the *\*badj* root yet to be discussed. The forms in *-du/dju* suggest that the root ended in a consonant, either palatalised or not, a CVC base.

The phonological shape of *\*ḡa-ju* as an ergative raises some difficulties, for *-ju* is not a normal form of *\*-lu*. If the base is *\*ḡanj* the formation would be *ḡanj+lu* ~ *ḡanjlu* ~ *ḡan-lju* ~ *ḡaju*. Yet such a base as *\*ḡanj* would be expected to produce *\*ḡanjɖju* and actually often does so. Perhaps it is needful to postulate *\*ḡaj* as well as *\*ḡanj*, and such forms as Djirbal *ḡajba* support this double form of the root. It may then be taken that there were at an early stage two forms of the first and second person pronouns: *\*ḡaj* and *\*ḡanj*, and similarly *\*n(j)in* and *\*ḡin* for the second. Both are widely found and it is difficult to separate them either geographically or historically. A change of any one into another is possible, but only if there was such early variation between *\*ḡaj* and *\*ḡanj*, and also *\*ḡan*. This is possible

Diagram I: The Distribution of -r- as a pluraliser in Australian Pronouns



if there was the development of the laminal series that Dixon (1970b) has postulated, and this would seem right. Alternatives for the second person singular are \*njin ~ \*ɲin ~ \*njun ~ \*ɲun, which on laminal variation is also likely.

The WD languages have a set \*ɲa-ju-lu, \*njun-du-lu which show that the variants mentioned above were once current in the west also. These are, however, formally double ergatives. In practice they may not be ergatives at all, being used often as the only form of the pronouns in use, with either transitive or intransitive verbs. Archaeological evidence (see Capell 1972:32-35) suggests that WD types moved eastwards about 6000 B.P. and westwards at some earlier date for which there is no evidence.

In the West before that date, it can be suggested only approximately what the situation was. It is to be presumed that the roots mentioned above were current there as EA forms, replaced in CA languages later by double ergatives. Earlier in non-EA times there had been languages of the Warnman type lacking true pronouns and using instead noun bases with possessive suffixes. However, the languages of the north-west (O'Grady's Ngayarda) and west coast present forms of the EA roots without double ergative, but with different forms such as ɲaɖa, *I* ergative or not, and these need further explanation which will be ventured below. These languages also have decidedly lower frequency of CA vocabulary than the WD, and support the theory suggested by Thorpe that early migration proceeded along the coast, from north Australia round towards the modern Perth, and eastwards via Torres Strait down the eastern coast, along the south to the mouth of the Murray and then inland towards the great river basins of Victoria and New South Wales. These will be discussed in section 6.

Thus the study of pronouns, especially the first two, will provide such answers as can be given to the historical question. Warnman, geographically excluded, must be regarded as an island of earlier speech by reason of the smallness of its CA content. It is perhaps the sole survivor of the interior western languages of earlier date.

In all the languages there are usually ergative forms of the pronouns of first and second singular, but not as a rule of dual and plural - especially ɲali, *you and I*. It is strange that this does not seem to be included in the ergative series but it is generally true. It has already been pointed out above that the ergative form \*ɲaju is difficult to explain, but there are other ergatives of this root that do not fit into the general pattern of noun ergatives at all. These are such as ɲaja, ɲaɖa which can be seen in many of the lists. Such

ergatives do not occur with nouns as a rule, except in the Arandic languages. This fact may give the clue: in these languages a final -u frequently becomes -a. It would seem therefore that at some early stage this -u -a was commoner, so that possibly *ɲaja \*ɲan-lju* which at an intermediate stage became *\*ɲalju* may give the explanation. In some cases there is the suffix *\*-badj*, to be explained below, which either took the place of the ergative (as in Yaralde *ɲab(i)*, Niwadja *ɲabi*, and others in Table 12) or survived in a different usage. Where *\*-badj* is used with an ergative in northern Australia and Cape York Peninsula, it follows the ergative stem, as in Anindiljawgwa *ɲa-ju-wa*, Nunggubuyu *ɲa-ju-wadj*) and in New South Wales in Awaba *ɲa-du-wa*, *njin-du-wa*, where these are the only pronouns. These do raise some historical problems, but the explanation seems to be that here offered. The addition of *\*-badj* to an ergative suggests that it ought to be written as a separate particle after the pronoun, and not as part of it: *ɲaju wa*, *ɲadu wa*, etc. This also brings out the real meaning of *\*badj*, as set out below.

There results therefore a Table like the following, adumbrated by Schmidt but not fully worked out:

Area	Erg. Suff.	Root	Erg. Form
Eastern	-ja/-dja	ɲanj,ɲin	ɲaja/ɲadja; ninda/ɲinda
Western	-ju/-dju	ɲanj	ɲaju/ɲadju; nindu/nundu

There are two other endings to pronouns other than those which mark the ergative. These are *\*-badj* (which usually by loss of final consonant appears as *-ba*, *-wa*, and in Cape York *-va*), and *\*-galig*, which appears as such in Victoria, but elsewhere *-gari*, *-gal*. The second is less common and phonemically more regular, so that it is convenient to take it first.

The suffix *-galig* in Victorian languages forms a trial number or a pausal plural with pronouns. It may be illustrated from Djadjala of north-western Victoria, as given in Mathews (1902):

<i>I</i>		<i>jurwe-g</i>
<i>we (plur.)</i>		<i>jurwe-ɲarag</i>
<i>we three</i>		<i>jurwe-ɲara(g)-galig</i>

Possessive suffixes may be superadded:

gadlmgadlm-eg		<i>my boomerang</i>
gadingadim-arag		<i>our (excl.) boomerangs</i>
gadingadim-ara(g)-galig		<i>our-three boomerangs</i>

In this usage, this suffix is limited to western Victoria. In some other areas of Victoria there are substitutes for it, so that the idea is retained elsewhere, but trial indication in Australia is rare, even though not limited to the south-east. There is, however, another use which is very widespread, 'group of people', which occurs in languages in which the suffix does not occur with pronouns at all. Hercus (1966) has shown that it appears as -gari in Arabana, meaning 'a group of connected people'. A third usage is as the ending of a tribal name in the form of -gal, and a glance at any tribal map of Australia will show how common it is as -gal, -wal, -bal; the most distant from Victoria being Wunambal of the northern Kimberley. To be so widespread as this, \*-galig must be a very early element in Australian language, even though now so limited in its original meaning.

The suffix \*-badj has also quite a wide range of occurrence, though it is chiefly in north Australia and in the central New South Wales coast. It may occur along with the ergative as \*ŋa-ju-wa in Anindiljawgwa; the full form \*-badj is established on the basis of Nunggubuyu only: ŋajuwadj. In Djirbal it occurs as ŋajba, *I* (nom.). Here Dixon first put forward the opinion that it was a phonological element only: '-ba has been added to roots in a number of languages for PURELY PHONOLOGICAL REASONS, e.g. so that every word should be at least disyllabic' (Dixon 1972:245). This would not be true for all languages, even in the same part of Queensland as Djirbal, to which it really refers. It seems doubtful whether such meaningless syllables ever occur in Australia. The explanation of -ba added to WD words which otherwise would end in a non-permissible consonant, as just such a 'nonsense syllable' is quite needless: it would be ba the third person pronoun intransitive in these languages, used redundantly like i in New Guinea Pidgin man i kam, *the man came*. However, in the later *A Grammar of Yidiŋ* Dixon himself has a better explanation: -ba indicates 'one of a group of people' (Dixon 1977:145). Surely this is precisely what it does mean as added to a pronoun, and even in non-singulars, such as Nunggubuyu nuguruwadj, *you pl.*, it is most natural to take it as 'you as individual members of a total group'.

The distribution of \*-badj (Map 2) is interesting: it is found in Arnhem Land east, Cape York north, along parts of the Queensland coast

(in these frequently with the bilabial *v*, *-va* peculiar to them), central New South Wales coast (Awaba, etc.) and once in Victoria in Bungandidj *ŋaɟuwadj*. It is thus a predominantly northern element; centred about Rose River and reaching westward in the form *-bi*, *-b* (see Table 12), and north-eastward in the form *\*-ba*. This supports the idea of a move from north Australia along the eastern coast southwards already suggested earlier in this section. The fact that it is added to an ergative in so many languages - in fact all the languages that have ergatives, points to its being an emphatic or discriminatory particle, not part of the pronoun. It should be written separately from the pronoun. In Nunggubuyu it is omitted in certain instances. On the other hand, where both intransitive and transitive pronouns exist, *\*-badj* is often added to the ergative only: in Djirbal first singular *ŋajba* (intr.), *ŋadja* (trs.); and second singular *nin-dja* and *nin-ba* correspondingly. This is not the normal ergative ending: in nouns that is *\*-lu* > *ŋgu*. Here again are problems that lie outside the range of the present research. Moreover, there are languages in which *\*-badj* functions, and which are ergative, but do not use *\*-lu* in the pronouns, e.g. Yarlalde *ŋa-bi*, *I*. So there would seem to have been historical difficulties as between this suffix and the ergative, and they were resolved differently in different areas. The WD languages with the *ŋa-ju-lu* type of pronoun (see 3.5.) are doubly ergative in form though perhaps not ergative at all in function. The suffix is essentially, it would seem, a property of the non-ergative languages. It needs also to be mentioned that there is no occurrence of *\*-badj* on the west coast of Western Australia. It is a purely eastern and northern phenomenon.

It is not the intention of this study to work in detail the position actually held by the writer, which would require much greater space. For the non-singular numbers of the *ŋa-* series of pronouns, a few leading points only will be made. They comprise the following:

1. As stated earlier, only the first and second person singular pronouns are claimed as being in any way original Australian. Third person, though patterning fairly well, is a demonstrative, not a true pronoun. Two roots are common, *ba*, erg. *ba-lu* in the west, and *nu-* ~ *nju-* ~ *ŋu-* in the east.
2. Second person plural is of special interest. It also has a root that appears to be *nu-*, but is probably the singular *nju-*, *nji-* with an added *-r-* pluraliser giving

Table 10: Enclitic Pronoun Subject Markers in Western Desert Languages

Language	Singular			Dual				Plural			
	1	2	3	1. incl.	1. excl.	2	3	1. incl.	1. excl.	2	3
Baljgu	-ḡa	-nba	ja/∅	-li	-lija	-nbula	-bula	-la	-guda	-nju	-ja
Inggarda	-ḡa	-nba	-∅	-li	∅	∅	∅	-la	∅	∅	∅
Garadjari	-ḡa	-n	-∅	-li	-la	-nbula	-bula	-nja	-jaḡa	-juru	-ja
Njangumarda	-ḡV	-n	-rV	-li	-laji	-njunbulu	-bulu	-nji	-jini	-njuru	ji
Warnman				(n o t u s e d)							
Julbaridja	-ḡa	-n	-∅	-li	-lidju	-lunbula	-bula	-la	-ladju	-njura	-ja
Bidjandjadjara	-ḡa	-na	-∅	-li	-lidju	-bula	-bula	-la	-ladjh	-la	-la
Waljbiri	-ḡa	-nba	-∅	-li	-lidjara	-mbula	-bula	-liba	-nalu	ḡulu	-lu ~-i
Mangala	-ḡa	-n	-na	-la	-yara	-mbala	-bala	-la	-ḡani	-njuru	-niyi
Walmadjari	-ḡa	-n	-∅	-li	-djara	-n	-bila	-liba	-ḡa	-n	∅
Djaru	-ḡa	-n	-∅	-li	-djara	-nbula	-bula	-liwa	-nali	-ndalu	-lu
Malngin	-ḡa	-n	-∅	-li	-ndja	-nbula	-wula	-la	-nda?	-nda	-lu
Mudbura	-ḡa	-n	-∅	-liwula	?	-nbula	-wula	-la	-nalu	-nda	-lu
Ngandi	-ḡa	-n	-∅	-li		-nbula	-balu	-liba	-nalu	-nda	-lu



Table 11: Free Pronouns of Western Desert and West Coast Languages of Western Australia

Language	Singular			Dual				Plural			
	1	2	3	1. incl.	1. excl.	2	3	1. incl.	1. excl.	2	3
Baljgu	ḡaḡa	njinda	ḡuḡa	ḡall	ḡallja	ḡubalu	ḡunḡuḡa	ḡaḡula	ḡanaḡa	ḡuwalu	ḡunḡadḡiri
Inggarda	ḡaḡaḡa	njinda	banja	ḡallil		ḡubala	bula	ḡanula		ḡura	ḡana
Garadjarl	ḡadju	nḡundu	bala	ḡall	ḡallja	nḡunbula	nḡḡuḡdḡara	ḡandḡuru	ḡanja	nḡura	nḡḡuru
Nḡangumarda	ḡadju	nḡundu	balinḡa	ḡall	ḡalajl	nḡumbala	bulanḡa	ḡandḡuru	ḡanaḡa	nḡura	dḡana
Warnman	(noun stem series)										
Julbaridḡa	ḡaju	ḡundu	nḡara	ḡajuḡuḡdḡara		nḡundu ḡuḡdḡara	nḡaragudḡara	ḡajuḡl		nḡunduḡl	nḡaradḡl
Bidḡandḡadḡara	ḡajulu	nḡundu	baluRa	ḡall		nḡuball					
Walḡbiri	ḡadju	nḡundu	jall	ḡall	ḡadḡara	nḡumbala	ḡadidḡara	ḡaliba	ḡanunba	nḡura	ḡallḡara
Mangala	ḡaju	nḡundu	bani	ḡallḡara	ḡalḡara	nḡumbala	banlḡara	ḡandḡuru	ḡanani	nḡura	banlḡadḡl
Walḡadḡari	ḡadju	nḡundu	nḡandu	ḡallidḡara	ḡadḡara	nḡuradḡara	nanadḡara	ḡalumba	ḡanamba	nḡura	nḡanduwandl
Dḡaru	ḡaḡa	nḡundu	nḡila	ḡall	ḡadḡara	nḡumbala	nḡilawila	ḡaliwa	ḡanimba	nḡura	nḡilandl
Malḡin	ḡaju	nḡundu	nḡa:wa	ḡali	ḡajira	nḡumbala	nḡandawula	ḡandiba	ḡallimba	nḡurulu	nḡanda
Nḡarinman	ḡaju	nḡundu	nḡawa	ḡajira		nḡunbula	nḡa:ḡuḡdḡara	ḡaliwa	ḡandiba	nḡurulu	nḡa:warā
Mudbura	ḡajl	nḡundu	jall								
Gurindḡi	ḡaju										
Nḡandi	ḡadju	nḡundu	jala	ḡall	ḡadḡara	nḡumbala	minḡanbula	ḡaliba	ḡanimba	nḡurula	minḡa
Nḡarla	ḡaja/i	nḡinba	ḡunḡi	ḡall	ḡallja	nḡumbalu	ḡunḡiblḡalu	ḡandḡara	ḡanana	nḡura	ḡunḡibajalu
Nḡamal	ḡadḡa	nḡundu	ḡunḡa	ḡalllu	ḡallja	nḡunbala	ḡunḡablḡalu	ḡandḡula	ḡanana	nḡuralu	dḡanalu
Bandḡima	ḡaḡa	njinda	ḡuna	ḡadubaḡa	ḡallja	nḡunbala	ḡunḡablḡalu	ḡandḡululu	ḡallḡaguRu	nḡubaluguRu	ḡunḡadḡiri
Jindḡibandḡi	ḡajl	njinda		ḡall	ḡajuwaḡa	nḡinḡuwl	ḡunuwuda	ḡajinḡari	ḡallḡamburu	nḡindawu	ḡunḡḡiri
Gariera	ḡajl	nḡindu	ḡuḡu	ḡall	ḡallḡara	nḡindubula	baluḡuḡa	ḡallḡuRu	ḡanaḡa	nḡindaguRu	baluḡuḡa
Dalandḡi	ḡaḡa	njinda	ḡuḡa	ḡall		ḡubala		ḡanḡu		ḡura	ḡana
Buduna	ḡaja	ḡi:	ḡuḡa	ḡall		nuwala		ḡunḡuru		ḡuralu	ḡunudḡiri
Bayungu	ḡaḡa	njinda	ḡuḡa	ḡall		ḡubala		ḡunḡura		ḡura	
Dargari	ḡaḡa	ḡura	ḡuḡa	ḡall		ḡubalu	ḡunḡagaḡara	ḡaḡ(d)ura		nḡagara	ḡunudḡari
Nanda	ḡajl	nḡini	inḡa-ala	ḡallidḡara		ḡubalu	alaḡara	ḡaḡu		ḡura	ḡajl
Wadḡug	ḡanja	nḡini	bal	ḡall		ḡubal	bula	ḡalada		nḡuraḡ	balḡun
East Mining	ḡadu	ḡundu	baḡaḡu	ḡandada		ḡunduguda	banagudara	ḡaḡdaml		ḡunḡuḡari	ḡajiru?



Table 12: Pronoun Sets in Languages of Arnhem Land and Barkly Tablelands<sup>1</sup>

Language	Singular			Plural			
	1	2	3	1. incl.	1. excl.	2	3
Multiple Classifying							
1. Laragiya	ɲa:nɔŋga	lɪdana	ja:ba	darandira	ɲaraŋara	guraŋgura	bidenbira
2. Gagadju <sup>2</sup>	ɲanɟma	ɲinɟama	na:wuna	manemanama	ɲa:dama	ɲamanama	nu'womana
3. Gunwinɟu	ɲaje	ɲuɟa	nunɟa	ɲa:ɟ	ɲa:ɟ	ɲuɟa	beda
4. Mangeri	ɲa:b	no:w	no:g	ɲarga	ɲanemɪnu	ɟinimɪnu	minimɪnu
5. Urningangg	ɲo:g	no:wu	no:g	ɲaragu	ɲanimɪnun	ɟinimɪnun	minumɪnun
6. Burera	ɲajbe	ɲinɟibe	nɪbe	ɲajɪribe	nɟajɪribe	nɪjɪribe	buribe
7. Mawng	ɲabi	nuɟi	janad	ɲarwuri	ɲael	nuwuri	we:nad
8. Nunggubuyu <sup>3</sup>	ɲa:ja-	nuga-	niga-	naguru-	nuru-	nuguru	wuguru
9. Wandarang	ɲina	ɲinɟu	nɪwa	ɲalbur	nɟɪlbur	ɲudbur	wudbur
10. Ngandi	ɲaja	nuwan	nɪnari	nɟarɟɟara	nɟɪra	nugara	banari
11. Ngalagan <sup>4</sup>	ɲajga	ɲinɟja	nɪndja	ɲurga-	ɟirga-	nurga-	burga-
12. Anindilɟawga	ɲajuwa	nunɟuwa	naŋa:ga	na'guruwa	ɟɪruwa	nun'guruwa	aburuwa
13. Anɟula	ɲana	ɟɪnda	ɟɪwa	ɲambala	ɲanu	ɟɪru	alu
Dual Classifying							
14. Wogadɟ	ɲadɟaŋa	ganɟa	dɟanɟɪdɟ	ɲarera	ɲara	nawara	baramɪdɟ
15. Nagara	ɲa:raba	nɟe:ɟaba	na:gaba	ɲubaraba	ɲɪbaraba	nubaraba	be:baraba
16. Gunavidɟi	ɲajaba	nɟinɟdɟaba	nagaɟaba	ɲaragaɟaba	nɟaragaɟaba	naragaɟaba	barabaɟaba
17. Mara	ɲina	nɪ:ɟa	nangaja <sup>5</sup>	ɲaruwinɟa	nɪruwinɟa	nuruwinɟa	walaja
18. Djawan	ɲarg	ɲin	ɲa:ɟu	nɟaraŋ	nɟaraŋ	nɟuraŋ	buranɟ
19. Alawa	ɲina	nɟangana	danɟa	nɟalu	ɲalu	wulu	ɟuludanɟa
Non-Classifying							
20. Jiwadɟa <sup>6</sup>	ɟabi	nuɟi	dɟanad	ɲarwuri	ɲari	nuwuri	wanad
21. Margu	ɟaɟa	nɪɟɪ	nɪɟad	ɲaraŋan	ɲadab	vanani	nagaginɟa
22. Amarag	ɟauwa	wamba	wandɟag	ɲarawa		ɲurawa	ɟɪɪmbag
23. Ranɟbarngu	ɟɪnda	danda	nɪ'da	ɟaga-	ɟanda-	nagunda-	bunda-
24. Buwan	ɟeɟi	nɟinɟ	nɪn	ɲor	nɟe:l	no:l	bunda
Suffixing Languages							
25. Gubabwiyngu	ɲara	nɪ	ɲajɪ	(ɲa)ɪɪmuru	(ɲa)naburu	numa	walala
26. Wan'guri	ɲaja	nunu	na:n	ɲalma	ɲanabu	numa	danal
Barkly Tablelands							
27. Dɟingɪɪ	ɲaja	n(ɟ)ama	-	ɲuruwala	ɲɪriwala	guruwala	-

1. Only masculine forms are given here.

2. Gagadju has feminine forms for all but first singular.

3. These add -wadɟ when independent.

4. The plurals suffix gabbul = 'three'.

5. Feminine ɲajara.

6. See Mawng forms also.



\*nura commonly, but probably more anciently \*nu-run. Forms of this \*nurun are found in the northern Kimberley and Arnhem Land on one side, and in Awaba of New South Wales central coast on the other. In Ngarinjin, for example, the plural pronouns are:

1. incl.     ŋa-run
1. excl.     nja-run
2. excl.     nu-run
3. excl.     bɪn-dun < bɪn-run

In Awaba there is no inclusive-exclusive distinction, but the pronouns are (1) plural ŋeen (probably for ŋaj-un < ŋa-run; (2) plural nu-r-a < nu-r-un (genitive case nu-run-ba). The wide occurrences of this form in Australian are set out on Diagrams I and II, and they are instructive. It might be added that the -r-plurals have still other occurrences in addition to these with \*nurun. These forms also will probably enable the pronoun for *thou* to be set down as \*nu rather than \*nun, nin or any of the forms that have been used hitherto.

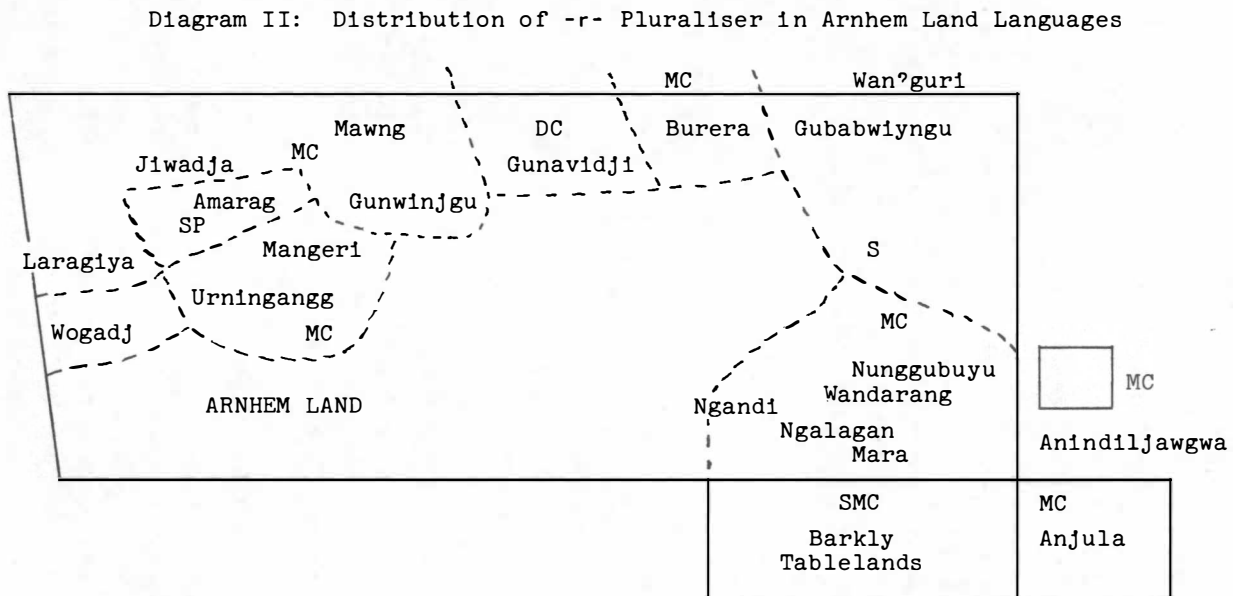
3. Plural forms did not originally, even when established, distinguish between inclusive and exclusive, and it is possible to trace the methods by which they were produced, although outside the scope of the present writing. Some of these can be worked out by study of Tables 10 and 11, which refer to the WD languages.

These outline remarks must suffice for the present moment. They establish the main features of the ŋa- set of pronouns, of EA period, which are not only basic to the languages involved, but are basic to Australian language in general. The languages which do not share them are not to be reckoned within either EA or CA.

### 3.5. Pronouns of the Western Desert Languages

The third series of pronouns is that of the WD languages, and these are to be regarded as CA: judging from Warnman, they will be replacements for an earlier - now lost - set of pronouns formed by adding a possessive suffix to a noun. The present sets are not only later than those of EA (of any kind at all), but are built on EA<sub>2</sub> roots, and their constitution as constructed forms is obvious as soon as they are

The following diagram (Diagram II) shows the congregation of -r- forms in the plural pronouns of the Arnhem Land languages, thus giving a possible clue to origins.



MC = Multiple Classifying (prefixing)

DC = Dual Classifying

SP = Simple Prefixing

S = Suffixing

analysed. Capell offered an analysis of these as early as 1955 (Capell 1955). So far this has not been controverted, and it is here taken as correct in outline, with a little more detail added. It would seem that the WD languages originally lacked pronouns as a category, but the situation here was not the same as elsewhere. The word order in these languages was at least a preferred VSO, and the pronoun subject or object, was added to the initial verb. Certain languages began to depart from this usage and evolved a 'catalyst' which carried the pronouns - but this is another story and will be dealt with in 3.6. The chief thing about it was that pronouns did not begin an utterance. It was only at a later stage, when SVO order came to be accepted, that the problem of a sentence initial that was not a verb arose and a way was found to deal with it. Whereas the EA pronouns (whether EA<sub>1</sub> or EA<sub>2</sub>) could begin a sentence and the verb might not bear any marker of person at all, the earliest CA utterance with initial verb carried a person marker as a suffix to the verb and was therefore second in order in the sentence. Tables 9 and 10 show the fully developed systems of CA pronouns as found in the modern WD languages. It remains to discuss and explain the tables, and to show the history of the AT system that characterises these languages. The origin of the AT system and its real meaning belongs to the study of CA syntax and is not dealt with at this point.

It will be seen immediately that Table 10 contains only suffixed pronouns, i.e. there are no free forms. This is the basis of the claim that WD pronouns were originally only suffixes to verbs and, by reason of the syntactic rules of these languages, were affixed at times also to non-verbs. The main rule is that a pronoun must stand second in the sentence if it is a subject and, if it is an object, must follow immediately on this subject pronoun: V + P<sub>sub</sub> + P<sub>obj</sub>. This holds good whether a language has catalysts or not. The development of independent pronouns came about with the adoption of SVO or SOV order, and this happened under the influence of the earlier language type. A set of independent pronouns was then developed; and it may be called a set because its membership was so much alike in all the languages that it can hardly be regarded as arising at more than one point of time or place. Moreover, the developed forms are mostly ergatives, whether the verb is transitive or not, and some are even double ergatives. This would suggest that the original CA languages (whatever they were; they can be judged only by Warnman nowadays) did not have an ergative: this came later, but its origin was then so well forgotten that another ergative ending could be added to it.

This theory is directly opposite the one propounded by K.L. Hale who says he does not regard the Warnman pronouns (as added to verb stems) as re-creations. One example (G.N. O'Grady and C.F. and F.M. Voegelin 1966) shows uses of -ŋa in more than one part of a single utterance, as in the following case (in which O'Grady's spelling is retained, but the elements of the utterance are isolated):

para-lu-ŋa-ŋku	para <sup>Y</sup> i	t <sup>Y</sup> inka-ŋa	para-ŋku-ku
<i>I- erg.-I-for-you</i>	<i>boomerang</i>	<i>make-I</i>	<i>you-for</i>

There are other ways given by O'Grady for expressing the same idea but this one is enough for the illustration. Here there is a typical WD repetition of bound pronouns, which are added to the noun (para-), the verb (t<sup>Y</sup>inka-) and subjected to AT treatment. The language has been as definitely transformed by the WD element as English structure by certain features of French, as in the case of Old English 'me was given a book' which gave way to 'I was given a book' because French demanded that the subject begin a sentence. Old English could allow initial dative + verb; French demanded subject + verb.

What Hale says (referring to Waljbiri but held to be general) is: 'I think it is reasonable to propose that the source of pronominal clitics in Waljbiri is in fact independent pronouns which, at some stage in the prehistory of the language, became unstressed and were attracted into clitic position (that is, second position) in accordance with a principle of clitic placement which is extremely widespread among the languages of the world' (Hale 1973:340). If the probability of the theory depends at all on its simplicity, that offered here seems simpler than Hale's and is therefore more likely.

If the present explanation is accepted, the Warnman ergative para-lu, I, would be a comparatively modern use. If the writer's theory (Capell 1972:32-5) is right, then the CA languages began to spread eastwards about 6000 B.P. This proposition is advanced on archaeological grounds; the tribes probably spread westwards at an earlier date, and has a more profound effect, as Warnman structure, compared with vocabulary, suggests.

Ultimately, a full set of independent pronouns developed, which could be sentence-initial, and take case endings in oblique cases just like nouns. These independent forms are shown in Table 11. They seem to be based on those of the north-west and west coast languages, which are finally EA in origin. From this point of view also, CA appears to be the latest level of Australian development. The disagreement between Hale and the present writer is concerned with the



actual process of formation. Hale regards the free pronouns as basic and the clitic forms as secondary; Capell takes the opposite point of view as regards development. In regard to final result there is no difference.

Whatever their origin, within the set of CA pronouns there are some differences that suggest stages of development, along the following lines:

1. First and second person singular are practically universal, and they are in ergative form but not restricted to ergative meaning. The various ergative endings are all present (-da, -ju, -lu etc.) and their distributions are probably not haphazard. The distribution of singular forms also is not haphazard. Glass and Hackett (1970:49) point out an interesting fact in Bidjandjadjara when they say: 'There are only two personal pronoun stems in Ngaanjatjara (sc. dialect): the first person stems /ŋayu/ and /ŋanku/ and the second person stem /nyuntu/'. There is no third person pronoun, and non-singulars are built on these two stems which were originally without specific dual and plural forms. This was earlier noted as a feature of early Australian language, and it means that although the WD languages are 'late' in many regards they are still quite ancient in terms of absolute history.
2. In the plural there is common use of \*nura for second person. In some languages it serves also as a singular. What has been said about EA pronouns therefore holds good in these WD pronouns also as regards the marking of a plural by -r-, and the Arnhem Land sets agree in this apparently basic Australian feature also. In the third person there is a regional separation between ba and nu- or ŋu- forms which is found likewise in the eastern EA languages. Inclusive-exclusive distinction occurs on a regional basis and something more will be said about this. Where both are present, formation and patterning can be mapped.
3. The construction of the dual can be analysed in an instructive way, when it is noticed that in some of the WD languages one says *I two*, not *we two*, e.g.

Julbaridja ɳaju gudjara, *I two*; njundu gudjara *you two*; njara gudjara, *he two*. In this language there is also the suffix -ɳi, which shows plurality in nouns and also in pronouns (the pronoun is still apparently a noun subcategory): ɳa-ju-ɳi, *I-erg.-plur.*; njundu-ɳi, *you-erg.-plur.*, ɳara-ɳi, *he-erg.-plur.* This makes it perfectly clear that the original pronouns, even in WD were only first and second person singular - and in Bidjandjadjara they are still such. This phenomenon is even older in WD languages, it would seem, than in the Altaic languages. In these latter, although they do have a set of plural pronouns, the older Chagatay Turkish may superadd the plural -lär to *biz*, *we*, and make a double plural *bizlär*. A careful survey of Table 11 will make these varied processes of 'filling in the gaps' clear; also it will bring out two further important points:

1. Some languages build a dual with \*buladj, the EA word for *two*, while others use the CA equivalent, \*gudara.
2. Some languages have no distinction of inclusive and exclusive in the first persons non-singular, but others have it. Those that do not have the distinction, use \*ɳali for *you and I* and also *he and I*, and \*ɳa-na for *we* as a plural. Where the distinction has been developed, it rests on some alteration in the use of the base words; \*ɳali becomes only inclusive, and \*ɳali-ja provides for *he and I*; in the plural \*ɳana-na becomes *he and I*, using the older -ɳa for *I*. It is the inclusive that is the innovation, although the Table gives very little indication as to the method of its formation. This appears more clearly in the EA lists already discussed. There are several instances involving the nominal pluraliser, showing clearly that the pronoun throughout of WD remains a subcategory of the noun, as mentioned above.

It is not necessary to discuss these forms further; reference to Capell 1955 will show the possibilities from the historical viewpoint.

The lack of inclusive-exclusive distinction may not be a measure of age: such distinctions may be linguistic rather than historical, as Hollenbach (1970) has shown: such a feature may be of psychological origin.

The elaborate process of development undergone by the original two pronoun roots - first and second person singular - of the Australian languages stands out clearly in the central area of the Western Desert, a point that has been recognised and emphasised by Glass and Hackett (1970:49-50) in their grammar of Bidjandjadjara, in which they remark:

'There are only two personal pronoun stems in Ngaanyatjara: the 1st person stem /ngayu/ and /nganku/ and the 2nd person stem nyuntu. These occur with slot-markers as shown below following an accusative system.

Person	Subject	Ablative	Object	Possessive
1.	ngayu-lu	ngayu-la	ngayu-nya	ngayu-ku
2.	njuntu-lu	njuntu-la	nyuntu-nya	njuntu-ku

These pronouns do not distinguish number. However, number distinctions can be made by the use of the enclitics which occur after the slot-marker. Forms without enclitics may be assumed to be singular. However, singular enclitics do also co-occur with the pronouns, when they may be regarded as having an emphatic sense.'

Glass and Hackett then list the whole series of dual and plural forms. The inclusive-exclusive distinction is accounted for also. These are produced by adding the suffixed pronouns to the stem:

Person	Subject	Object
1. sing.	ŋaju-lu-ŋa	ŋaju-lu-ŋi
1. dual		
incl.	ŋaju-lu-li	ŋaju-nja-li-nja
excl.	ŋaju-lu-lin	ŋa-ju-nja-li-nja-dju
1. plur.		
incl.	ŋa-ju-lu-la	ŋa-ju-nja-la-nja
excl.	ŋa-ju-lu-lan	ŋa-ju-nja-la-nja-dju

The second person is treated similarly, and the process of agglutinative expansion becomes clear, including the fact that the object is indicated by *-nja-* twice over in the dual and plural forms. It is perfectly clear that these languages have adopted a system entirely different from that of their own nature and have done it so clumsily that the steps are all perfectly clear. The writers of the Ngaanyatjara Grammar have not hyphenated the forms as is done above: had they done so, the diagram would have been so much the clearer.

That this was not only the basic process of pronoun expansion is clear; comparison with other languages shows that each has proceeded in its own way. The dual number is especially interesting in this connection, for in some WD languages there is for *you two* *njunbula* and in others *njun-bala*; the distinction is not a mishearing or careless spelling, but a pointer to a different interpretation: *njun-bula* is *you-two*, whereas *njun-bala* is *you (and) he* - a different concept of duality, a kind of inclusive-exclusive second person distinction.

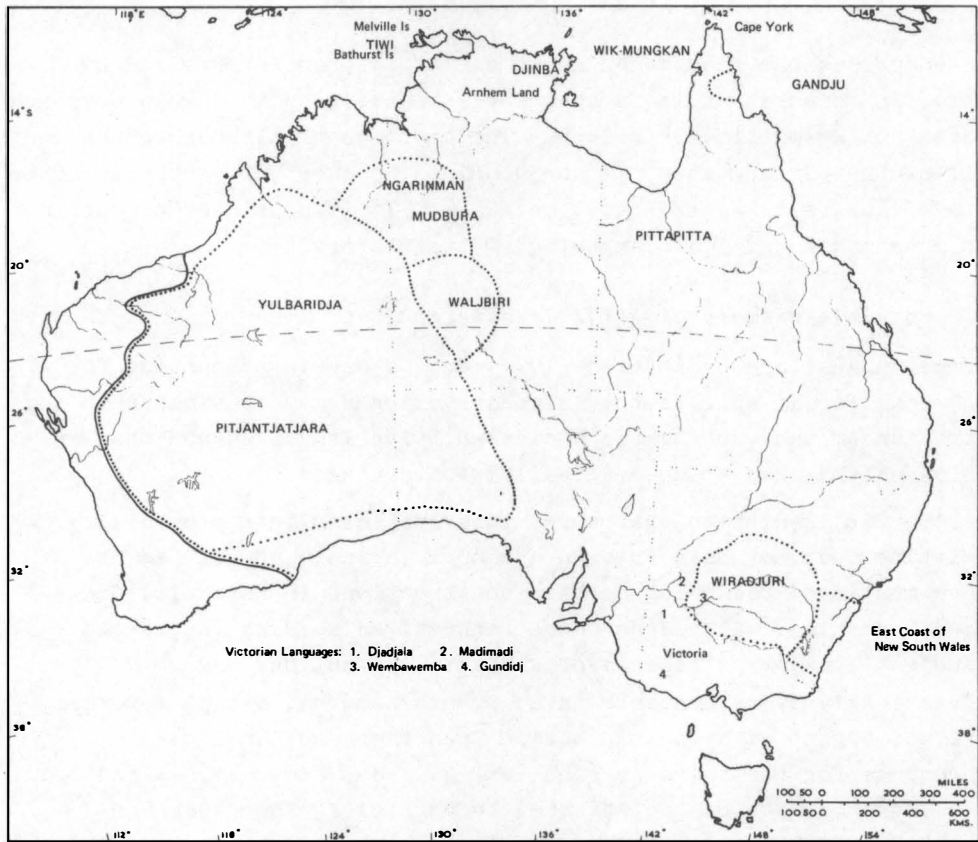
In studying these forms, it is impossible to miss the fact that something has gone wrong: the ergative is present throughout whether the pronoun is subject of a transitive or an intransitive verb - the distinction is levelled out altogether. Not only so, but the pronoun is a double ergative form: (*ŋa + ju*) + *lu*. The verbal person marker is then superadded: {[(*ŋa + ju*) + *lu*] + *ŋa*}. It is, therefore, necessary to study this extraordinary phenomenon, and this will be done below. A few phrases in Bidjandjadjara will show how the system functions in general; reference should be made to Capell (1972) for details of the various languages. There are in fact several ways of saying the same thing - with some change of emphasis, but not of meaning. Examples will be used from Waljbiri:

- I will hit you:* (a) *bu- ŋgugu- ŋa -nda*  
*hit- will- I- you*
- (b) *ŋajulu-ŋa-nda bu-ŋgugu*  
*I- I -you hit-will*

In the second case the emphasis is on *I* as actor: for non-emphatic actor the (a) example is valid. If there is an actor indicator it comes immediately after the first word of the sentence

*djila -ŋa- ŋgu ba-ru*  
*kangaroo-I-for-you shoot-will*

This type of sentence involves the head word as the base to which the actor is added: if it is a full pronoun, the actor is added to it but,



Map 4: Tentative Map Showing Distribution of Affix-Transferring Languages in Australia (based on information from Capell's map, *linguistics* 87, 1973, p.7)

in this case, there is extra emphasis on it. Certain other types or classes of word take the suffixed pronoun when they are headwords - amongst them negatives and interrogatives:

Bidjandjadjara nja:gu -ngu -n bu-ŋanji?  
*why-yourself-you hit-present*  
*Why are you hitting yourself?*

ŋana-lu-ŋi bambu-ŋu  
*who-erg.-me touch-past*  
*Who touched me?*

This comprises the phenomenon known as 'affix transference' (abbreviated as AT), in which an affix is apparently transferred to a word to which it does not grammatically belong. The phenomenon, although characteristic of the WD languages, is not confined to them but occurs in other areas of Australia as indicated on Map 4. Is it possible to explain this phenomenon and learn anything of its history?

### 3.6. Possible History of Affix Transference

Some suggestions by Anttila (1972) are of use in accounting for AT phenomena, for it appears that a construction somewhat similar to the Australian AT was part of the ancient Hittite language, and that in both cases this has to do originally with syntax:

'But it is Hittite that turns this suspicion into probability. Hittite does not have such an anaphoric pronoun at all [as he has mentioned regarding certain constructions in Sanskrit, Greek and Germanic]. It has sentence connectives *su*, *and* (unchanged subject), *ta*, *then* (change of subject) and *nu*, *and now*. Practically every sentence in a given discourse, except for the first, begins with one of these. Then there are enclitic pronouns for the third person, *-as*, *he*, *-an*, *him*, *-at*, *it* and *-us*, *them*, which can be attached to particles other than the sentence connectives, for example, *-wa(r)-*, 'direct quotation': *nu-war-as*, *and now he said*: "...", or *nu-smas-an*, *and now you him*. But when no other particles intervene we get the following conglomerates of the sentence connective plus the enclitic pronoun:

nas	tas	sas	<i>and he</i> (nom. masc. sing.)
nan	tan	san	<i>and him</i> (acc. masc. sing.)
nat	tat	-	<i>and it</i> (neut. sing.)
ne	-	se	<i>and they</i> (nom. masc. plur.)

The formal similarity of the last two columns to the pronoun \*so/\*to is obvious. There must be a historical connection. The best inference is that the Indo-European pronoun is a fusion of the earlier sentence connective plus the enclitic pronoun' (Anttila 1972:359).

Something very similar will have happened in the Australian languages, where enclitic pronouns occur in the WD-CA group, entirely different in form (at least as regards the singular number) from the other Australian pronouns, at any rate when used as suffixes. It is not a case of a sentence connective leading to a base to which the person markers are added, though the 'catalysts' of some WD languages may well be such (see 3.8.). In the WD languages, the tendency to place subject and object pronouns before the verb has led to the markers being attached to the headword by a process which is ultimately one of loss of stress. Even if the cardinal pronoun happens to begin the sentence, WD languages will add the pronoun suffixes to this, e.g. Bidjandjadjara:

Bidjandjadjara	ɲajulu-ɲa-nda	bambu-ɲu
	<i>I-I-you</i>	<i>touch-did</i>
	<i>I touched you.</i>	

In such a case the subject is strongly emphasised.

A detailed study of AT phenomena, together with an attempt to reconstruct an outline of their probable history will be found in Capell 1972. Since then, however, he has had further thoughts on the matter, and it seems that another explanation arises from the comparison with Hittite, namely, that the 'transfer' is more a matter of pronunciation than of grammatical change; the following paragraphs will show what is meant by this.

Generally in Bidjandjadjara the order S + O + V holds good:

Franklu	linyatju	ya <u>lti</u> -ranjtju <sup>1</sup>
<i>Frank</i>	<i>us</i>	<i>called</i>

If third person singular is zero, the pattern can still be considered to hold good:

∅	pitja-ɲu	∅	tjananya	nja-ɲu
<i>he</i>	<i>came</i>	<i>he</i>	<i>them</i>	<i>saw</i>

<sup>1</sup>Extract from Glass and Hackett 1970:37-42.

Conjunctions call for an extra person marker:

ka-lanyatju Howard-u lanyatju makatl-ŋu  
*and us Howard us took*  
*And Howard took us.*

There may have been a feeling that someone was needed to be talked about, and the indicator was given along with the conjunction.

Interrogatives can be thought of as not requiring any change of position if the pronoun, even though only a single consonant, is regarded as preceding the verb:

wanyatjatja -n tuju-nu  
*where you put (it)?*

A seeming double transposition is to be explained along the same lines:

wanyatjatja-ŋa-nta nja-ŋu?  
*where I you saw?*

In this case the AT phenomenon is more apparent than real; but it has carried over into many other languages, in addition to the original WD group where it originates. But - and this is the important point which sets these languages apart - the actual forms of the enclitic pronouns are different from those in other areas of Australia. They would be:



	Subject				Object			
Singular	1. incl. -	1. excl. ŋa	2 n	3 ∅	1. incl. -	1. excl. ni	2 nta	3 lu
Dual	li(n)	litju	pula(n)	pula	linja	linjatju	pulanjanta	pulanja
Plural	la(n)	latju	ya(n)	ya	lanja	lanjatju	tjananjanta	tjananja

If this set of suffixes is broken down into its primal forms, the result is:

Subject: Sing. 1.	ŋa	Object: Sing. 1.	ni
2.	n	2.	n-da
3.	∅	3.	lu
Dual 1. incl. li		Dual 1. incl. li-nja	
1. excl. li-dju		1. excl. li-nja-dju	
2. bula-n		2. bula-nja-nda	
3. bula		3. djana-nja-nda	
Plur. 1. incl. la		Plur. 1. incl. la-nja	
1. excl. la-dju		1. excl. la-nja-dju	
2. ja-n		2. djana-nja-nda	
3. ja		3. djana-nja-nda	

These sets show a composite history which is rather complicated. Firstly, \*bula-n is *two-thou*, as in the non-WD \*buladj, *two* with suffixation of -n, 'second person singular'. Yet this \*buladj is not a numeral in these languages, and the original final palatal plosive has already been lost before the numeral came into use in the eastern WD languages. The true CA numeral for *two* is \*gudara; \*buladj appears in some WD languages but not as a free numeral, only in suffix form with dual number. The plural object non-first person is djana, also taken to be a CA form, but possibly, from its eastern occurrences, also EA. Each set points back to a time when there was as yet no division into three persons: it was an inclusive-exclusive person, as it still is in the Kiwai area of New Guinea. There are, then, three steps to be reconstructed: (i) inclusive-exclusive person system, (ii) second person -n developed along with -ŋa first person, and (iii) distinction of three persons. The 'objective' -ŋja is then taken over from the declension of nouns - which pronouns historically are - and another exclusive person marker, -du, -dju, and this, basically meaning *me* and so is by itself the first person singular possessive marker in most WD languages.

If there is any truth in this analysis, the example first given will simply be

ŋa-ju-lu-ŋa-nda bambu-ŋu  
I-erg/-erg-I-you touch-past

In this, ŋajulu is an emphatic subject, not necessary, and not disturbing the SOV order. However, such an utterance as

nja-ŋu- ŋa-nda  
see-past-I-you

may seem to upset the scheme, but does not really do so, if it is remembered that the pronouns are *enclitics*, and as such they must have a support. They obtain this through change of position if there is nothing preceding them. This prefixing - suffixing interchange is apparently of old standing in Australia dating from times of free order. If the verb stands first they must follow it just because they cannot stand alone: neither can they be proclitics. There are therefore the two patterns:

1. njáŋuŋanda
2. ŋájuluŋànda njaŋu

which are equivalent. The main stress in each case is found at the beginning of the utterance.

Abolition of a special AT phenomenon does not remove the need to explain the peculiarity hitherto discussed under that name. The explanation now required is: where did the set of pronouns come from? For the singular person markers are different from those generally used in other Australian languages.' This will be demonstrated below. How did *bula two* come to be involved in them when in WD languages \**gudara* is *two*? Why did this group begin from an inclusive-exclusive person type when apparently \*EA distinguished three persons?

The last question is further complicated in that in the independent pronouns these WD languages (= CA languages) do have three persons. It is only in the verb that the distinction is lacking, and this has been overcome more or less 'artificially'. In the Kiwai languages of New Guinea the same thing occurs. There are two separate persons in the verb but three pronouns. In the WD languages the pronouns are composite and far from 'primitive'. In a paper by Capell (1955:288), they have been studied and certain findings made. These findings are briefly:

1. Australian languages did not originally have a dual number. The earliest developed are found in some of the language isolates and then there is only an inclusive dual of first person: Tiwi *muwa*; EA developed *nali* which is now almost universal.
2. Inclusive-exclusive distinction is also absent from the earliest stratum of languages. Where it is found, there is more than one type. In some WD languages, Walmadjari, Djaru, Malngin, Ngarinman, Ngardi and Wanayaga form one group; Garadjari and Mangala form another, and both are geographical blocs. Bidjandjadjara stands in fairly close relationship to the second set. In Mudbura the bulk of the cardinal pronouns are not used as subjects at all.
3. Two types of dual second and third person are found, one of which means *you and he* (\**nju-bala*), and the other *you-two* (\**nju-bula*), and in the third person a term which means *they two*, where the numeral is expressed by either *bula* or *gudara*, and these numerals represent EA \**buladj* and CA \**gudara* respectively. The two systems cross each other geographically, showing that both are relatively early within WD even though the whole idea of a dual is late.

### 3.7. Cape York Pronominal Systems

A study of these languages shows that they are relatively late, for in them \*buladj often ceases to be a numeral at all, and the derivative bula may be a plural, *they*. Table 13 shows a selection of these languages. In the extreme north the suffix \*-badj appears as a suffix -va (one of the few areas where the bilabial v appears), and this has been studied in 3.4. above. Another mark of the lateness of the CY languages is the heavy loss of initial consonants in some of them. For these see Hale (1976a) and Sutton (1976a).

The search for forms corresponding to the WD 'short pronouns', however, may well begin from CY also, for there the Wik-Mungkan language presents a set of suffixed pronouns which are rather like them. They are subject markers to verbs, and are set out as follows:

Person	1. incl.	1. excl.	2	3
Number: singular	-	-ŋa	-na	-wa
dual	-li	-na	-wa	-bula
plural		-mbu	-na	-wa

These forms look strange at first, but if they are regarded as originally enclitics, something of the strangeness disappears. The -ŋa form then shows \*ŋa as a suffix: the -na suggests the original syllabic form of WD -n, while -wa may quite well answer to EA ba, third singular, ergative -ba-lu found in parts of Western Australia; -bula retains its original value as a dual marker (*two* being most easily applied to the third person), and the only unexplained part is -mbu, *we*, showing no distinction of inclusive-exclusive.

There is much resemblance to the WD forms, and the absence of an inclusive-exclusive form occurs also in the languages of the extreme south-west, in the Narrinjeri group, Banggala, Meyu Gurna and in the east coast languages such as Bandjalong and Durubul. In North Queensland it is lacking also in the Gugu- languages as a whole.

### 3.8. The 'Catalyst' Systems

#### 3.8.1. The Western Desert Languages

In most WD languages there are person markers almost identical in form (and in the singular entirely so: the singular seems to be the basic set, dual and plural being later developments, as elsewhere in

Table 13: Some Cape York Peninsula Pronouns

	Uradhi	Kantju	Lamalama	Yalandji	Oykangand	Thayorre	Mungkan
Sing. 1.	ajuva	ɲaja	ya	ɲaju	a j	ɲaj	ɲaj
2.	anduva	ɲuno	tuy	jundu	i naɲ	ɲunt	nint
3.	olovo	ɲula	luy	njulu	i l	ɲul	nil
Dual 1. incl.	aliva	ɲali	lata	} ɲali	alij	ɲal	ɲal
1. excl.	-	ɲana pa'amu	lala		alinj	ɲali	ɲan
2.	anava	ɲu'u l pa'amu	pol	jubaj	upal	ɲip	nip
3.	ebura	pula pa'amu	lo	bula	ul	pul	pul
Plur. 1. incl.	ambo	ɲampula	lapal	ɲandjin	ampul	ɲamp	ɲamp
1. excl.	-	ɲana	lada	ɲana	anjtan	ɲanjn	ɲan
2.	anava	ɲu'u la	ro	jura	urr	ɲur	nilj
3.	ebura	pula	dey	djana	etn	pe ln	tan

References: Urađi: Bandji dialect, A. Capell field notes; S.H. Ray (1907b:272-3), with some differences and apparent contamination with Yaraikana.

Kantju: Capell field notes.

Lamalama: D.C. Laycock (1969).

Yalandji: R. Hershberger (1964:55-68).

Oykangand (Kunjen): B.A. Sommer and E.G. Sommer (1967).

Thayorre: A.H. Hall, unpublished thesis (1972).

Mungkan (Wik-Mungkan): M. Godfrey and H.B. Kerr (1964:13-34).

Australia). These are set out in Table 10. In the languages north and south of these, no markers appear: the verb is invariable for person. In Njamal, only the first singular is found: -*ŋa*. The other known languages, Bandjima, Jindjibandji, Ngarluma-Gariera, Dalandji, Buduna, Dharagi, Bayungu, Njungar, and the Mirning group, have none. In Nanda, the person suffixes occur in two forms, but they mark goal and benefactive, not subject.

Full sets of pronominal subject affixes occur in Baljgu, Inggarda, Warnman, Julbaridja, Bidjandjadjara and the closely related dialects, as shown in the Table. In the WD groups occurring in the Northern Territory, person markers are present, e.g. Waljbiri, but in certain of these they are added not to the verbal stem (which takes on tense/mood indicators) but to certain particles which serve only as carriers and have been called 'catalysts'. These languages are found on the northern edge of the WD group (see Map 5).

Catalysts are bases which carry no lexical meaning but serve to support the markers of person both subject and object. Thus in Mudbura, let C = catalyst,

*gula ba-ŋa-ŋgu ŋarga ma-nini*  
*not C-I-you understanding take-pres*  
*I don't understand you.*

Here the auxiliary verb *ma-*, *take*, is marked for tense, and subject and object are carried by the catalyst *ba-*. Note also that the pronouns are not shifted to the headword of the sentence but only to the catalyst. The sentence could then be arranged as:

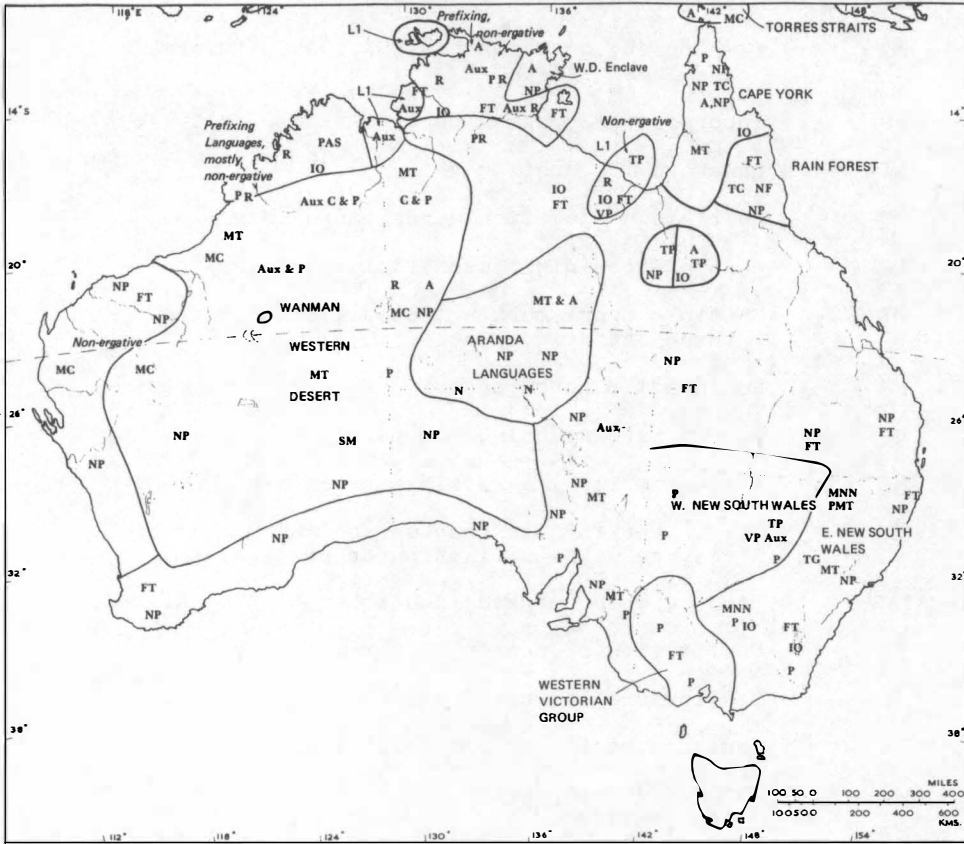
Neg.	Cat.	Sub.	I.obj.	Dir.obj.	Verb-pres.
<i>gula</i>	<i>ba-</i>	<i>ŋa-</i>	<i>ŋgu</i>	<i>ŋarga</i>	<i>ma-nini</i>
<i>not</i>	<i>-</i>	<i>I</i>	<i>you</i>	<i>understanding</i>	<i>take</i>

keeping the same relative arrangement of parts, as in the WD languages, and the S-O-V word order.

Catalysts are found in the northern WD languages. In Waljbiri, the southernmost of them, both direct suffixation and catalysts are present (and not interchangeably); north of Waljbiri catalysts only are found in Djaru, Malngin, Mudbura, Gurindji and Ngarinman.

A quotation from NAAL may be helpful at this point:

'Thus an original freedom of arrangement came to be gradually limited in various ways in different areas. At scattered points outside the WD area a similar elasticity of order is still found in languages which have developed a fixed morphological system



Map 5: Australian Verbal Systems

LEGEND TO MAP 5:  
AUSTRALIAN VERBAL SYSTEMS

Symbol	Explanation
A	Aspect stressed rather than tense.
Aux	Auxiliary verbs carry main markers.
C	Catalysts carry main markers.
FT	Few tenses, normally present, past, future and imperative.
IO	Incorporated pronoun object as well as subject.
LI	Language isolate(s).
MC	Multiple conjugation types (more than two).
MNN	Morning-noon-night subdivisions of tenses.
MT	Multiple tense marking, subdivision of the three main tenses.
NF	No formal future (past and non-past only).
N	Number marking only, not person.
NP	No person marking within a tense.
P	Person marking for each person and number (may go with suffixation or prefixation).
PAS	Passive voice marked (subject not in ergative).
PR	Prefixation of person markers.
R	Realis-irrealis distinction made in moods.
SM	Sentence medial or participial forms found.
TC	Two conjugation types, transitive and intransitive.
TP	Tense marking in pronoun as well as verbs.



so far as the regular suffixes are concerned. In the middle of South Australia Arabana can express *I am hot* by *anda ɲardanda* or by *ɲardanda anda*; *bad girl* by *gwija madlandi* or *madlandi gwija*; *my house* may be *wali andena*, and *my ear* *anden jirari*.

'In this connection a useful concept is provided by Zipf (Zipf 1936:154) in his phrase "degree of ... configuration". He says: "the degree of ... configuration implies little more than this: the more firmly agglutinized, that is, the more immutable in arrangement, the constituent morphemes are in a word, the greater is the degree of crystallization. The differing degrees of crystallization of configurations can perhaps be best apprehended by comparing the crystallization of phonemes in a morpheme-configuration, of morphemes in a word-configuration, and of words in a sentence-configuration; phonemes are normally far more crystallized in their configuration in a morpheme, than morphemes in a word, and morphemes in a word more crystallized than words in a sentence. In the decreasing order of crystallization from phoneme through sentence, there is increasing degree of choice in arrangement. We shall find that these differences of the degree of crystallization are closely associated with other phenomena of language." What appears in the Australian languages is a gradually increasing "degree of crystallization".'

(Capell 1962:11-12.)

The catalysts found in the relevant languages of WD and Northern Territory are set out in the following table; for the present purposes there is no need to specify their exact usages in each language. Sometimes *ba* and *ɲa* distinguish tense. Only Mudbura has a series of special forms which need a note. The catalysts, then, are usually:

<i>ba</i>	Julbaridja, Mangala, Walmadjari, Mudbura, Ngarinman
<i>ɲa</i>	Mangala, Walmadjiri, Djaru, Warnman
<i>ɲu</i>	Malngin, Ngarinman, Ngardi, Gugadja

The two forms *ɲa* and *ɲu* are identical in origin and do not meet in the same language. There is also a *ga* in Bidjandjadjara and Waljbiri. In the latter language and in Wanayaga, the catalysts share the field with suffixation of the pronouns directly to verbal stems. In this use the time is always past. The form *ba* is also past, and there seems

to be no difference between *ba-ŋa Jani* and *Jani-ŋa*, *I went*; but *ga-ŋa jan-* is non-past; whether it is present or future depends on the ending of the verb, *jan-i* past or *jan-gu* future. In the neighbouring Gugadja, the catalyst alone is used

djaljgu gula ŋu-na-la nja-ŋgu  
*today not C- I-him see shall*

Two Arnhem Land languages also have this system: Djinba and Djinang. Of these it was written (Capell 1942, Part 2, p. 46):

'In Djinba, the verb is conjugated in the present tense by means of the particle *ba*, which takes the shortened pronouns of the subject, and to them may be added those of the object in the transitive verb. Comparison with Mudbura may be made as follows: *I shall go, I am going*:

Person	Djinba	Mudbura
Sing. 1.	<i>ba-nar garme</i>	<i>ba-ŋa janduru</i>
2.	<i>ba-n garme</i>	<i>ba-n janduru</i>
3.	<i>ba-n garme</i>	<i>ba janduru</i>
Plur. 1. incl.	<i>ba-lim garme</i>	<i>ba-!a janduru</i>
1. excl.	<i>ba-nanj garme</i>	<i>ba-nali janduru</i>
2.	<i>ba-nŋej garme</i>	<i>ba-nda janduru</i>
3.	<i>ba-ndjan garme</i>	<i>ba-li janduru</i>

The object forms differ somewhat in that Djinba then drops *ba*: Mudbura *ba-ŋa-ŋgulu I see you*, but Djinba *njur njane, (I) you see.*'

In Mudbura, the most elaborated of these languages, combinations provide for more exact semantics.

'It has (1) *ba*, aorist; (2) *bi*, hypothetical; (3) *nj*, futurity; (4) *nja...ba*, with infixed pronouns, conditional; (5) *ba...ba*, contingency. Thus, *ba-n ŋana-ni maŋarima? Have you eaten food? wandjuga ba? where is he? bi:dja njanana, he might see me (-dja = me); bi-ŋalaŋalu laŋanara, they would like to kill us; nja-na juŋguru, I'm going to give it to him; nja-ŋa-ba ginanguja jali garu, ba-ŋa baru-ru, if I catch that boy I'll beat him; ba-ŋa-ba wandula, nja-ŋa-ba njangala, I would catch him if I saw him* (Capell 1940:426).

### 3.8.2. Catalysts other than Western Desert

Another fact, however, is important. Catalysts are not confined to the WD set of languages. In NAAL, similar phenomena occurring in other parts of Australia were not classified as catalytic in nature, but it is better that they should be. They appear in western Victoria, and in eastern and central New South Wales - both areas strongly affected by CA influence (as will be shown later). They were found in Awaba by L.E. Threlkeld although he did not designate them by this term. They appear also in the Guringgay material compiled but not published by him (Capell 1970). The area of their occurrence is thus prolonged to south and east of the WD. In Awaba and Guringgay there are catalysts *ba-*, *ga-*, *ma-* and *na-*. Threlkeld sought to analyse these (Threlkeld 1950). Such usages, to him, suggested certain basic ideas:

'*ba*, actuality of verbal being; the verb *is* in a verbal sense only; *ga-*, actuality of being personal, in any state, *is*; *ma-*, actuality of causation, *done*; *na-*, actuality of personality. The person is the actual.'

Capell suggested (NAAL:70): 'action as such, being as such, making, causing, and personal action' respectively. The WD *na-* and *nu-* forms are the same as New South Wales *na-*, purely vowel variants such as are very common in the Australian scene.

In Iyora (Sydney, New South Wales), *ba-*, *ma-* and *da-* are present, but here they serve as tense markers, and to the south and west of Sydney *ma-* is frequent but not the others. From their spread they seem to be CA forms only, though borrowed into other languages.

When *ma-* is considered, however, a transition is being made to auxiliary verbs and compound conjugations, which are found in Queensland, Arnhem Land, and Northern Kimberley languages on a large scale. The phenomena are not quite the same but historically they may well be connected. The CA root for *take* is *ma-* and *ga-* is the root for *bring*, *hold*; these are used either independently or as auxiliaries/catalysts in a wide scatter of languages. The important difference is that in these eastern languages, the WD (= CA) person markers do not accompany them, but other sets of suffixed markers yet to be discussed are found.

### 3.8.3. Auxiliary Verbs

When *ma* as catalyst is considered, a transition to auxiliary verbs is being made, for this is the CA root *ma-*, *take*, as well as appearing as a catalyst in the WD languages and others. The two uses are not quite the same. When *ma-* is being used as a catalyst, there is no semantic factor involved; when it is being used as an auxiliary, the

lexical meaning retains its force to a noticeable degree. For example, in Iyora *ba-* marks a present tense, and *ma* a future tense; the lexical meaning of either does not appear. Where it is used as an auxiliary, its meaning appears as 'action by carrying' or some such meaning. Moreover, it can in many languages appear as an independent verb, in some as an auxiliary, and in others as only a catalyst: the independent status would seem to be prior, as was probably the case of the other catalysts if they could be recognised. In the eastern languages where such forms occur, the WD person markers do not accompany the catalysts (*ba-ŋa*, *ma-ŋa*, etc.) but other sets of suffixes, yet to be discussed, take their places.

### 3.9. Summary Survey

There are thus three sets of languages on a geographical basis which do not possess true pronouns, one in Western Australia and two in eastern Australia. Warnman, in the WD area, stands quite by itself as might be expected: its noun-root is not the same as those in the east and could hardly be expected to be so if it is truly primitive or early Australia. In the east, western and central Victoria share two roots, *\*baN* and *\*jurw-* respectively. The former is a recognisable EA root which the preceding section has shown to be very widespread, in fact almost continent-wide; the latter seems to be local and isolated. Eastern New South Wales has been shown to have another EA root, *\*gulaŋ*, *skin*, as the basis of its pronouns, and these languages are not coastal but some distance inland - just far enough inland to be forced away from the coast by later comers - and this suggestion is going to have its value later, for the actual coastal languages will appear to possess the *\*ŋa-*, *I* and *\*njin*, *you* roots which are the true EA and first developed pronouns in Australia. The two sets of Victorian noun bases for pronouns are clearly separate and therefore represent the oldest forms found within the continent. If Warnman *bara-* is looked at in the light of EA *bara*, *they*, it might seem that here we have evidence to link it with the New South Wales central coast; but there is not enough definite evidence to support the suggestion and Warnman must be left to stand alone at least for the present.

The present theory is therefore that these three isolated regions represent the oldest Australian method of constructing pronouns, and that they were followed by the *\*ŋa-*, *\*njin* languages. Seeing that in the O'Grady-Voegelin maps, Arnhem Land contains all but one of the phyla projected for Australia, it might look as though Arnhem Land ought to contain many sets of aberrant pronouns. In actual fact,

however, it does not and this is one of the strange points about that classification. Even languages like Margu and some of the Daly River languages seem to agree with EA in their pronoun systems. The pronouns given by Tryon (1974:294-5) are in all conscience aberrant enough, like the bulk of Daly River linguistics, but at least they should be EA sharing: more will have to be said about them later.

### 3.10. Evolution of the Pronouns in Australia

There has been a general process of evolution of non-singular pronouns in Australia. The third person has always been indicated by a deictic and some languages have distance marking forms (Aranda, Bidabida, Northern Kimberley, etc.). It is only for the first and second person that pronominal roots appear, and these are fairly frequently \* $\eta$ a, \* $\eta$ aj, *I* and \* $\eta$ jin, \* $\eta$ in, *you*. To these may be added \* $\eta$ ali, *you and I*. In some areas the first inclusive is the only dual form (Tiwi, Dampier Land). The others show clear marks of later manufacture. Similarly, plurals are of later production. In some areas inclusive-exclusive distinction has never been made. Even where it is found, dialects may lack it; in the WD languages it is absent from certain of the dialects but present in others.

For the process of evolution of number, certain evidence may be produced. In Aranda and Bidabida, suffixes to the verb indicate dual and plural not person, although there is a full set of pronouns. In Ngiyamba and other languages of the northern interior of New South Wales the patterning is fairly clear. The verbal suffixes are:

Person	Singular	Dual	Plural
1. incl.	-	-li	$\eta$ a-jani
1. excl.	- <u>du</u>	-li-na	$\eta$ a-jani-na
2.	-ndu	-ndu-bula	ndu-gal
3.	-lu	-lu-bula	-lu-gal

This language belongs to the group that adds the ergative case ending of the pronoun to the verb. The singular is, therefore, clear; dual is based on  $\eta$ ali for the first person, and the plural on  $\eta$ a-jani, i.e. first singular root with an unidentified suffix; the second and third person dual and plural are simply the singular (isolated ergative case ending) with a number suffix - bula < \*buladj, *two* for the dual and -gal < \*galig, *group of people* for the plural.

This is actually a very peculiar type of formation. The use of the ergative case ending in the singular only marks the late development of a conjugation system; but the two suffixes used to form the second and third persons are both \*EA.

In the far north, Wik-Mungkan (Cape York) has a different set of suffixes to the verb, but a rather similar process seems to lie behind them:

Person	Singular	Dual	Plural
1. incl.	-	-li	} -mbu
1. excl.	-ŋa	-na	
2.	-na	-wa	-na
3.	-wa/-na/∅	-bula	-wa

i.e., there is no plural exclusive pronoun but there is one for dual, and bula is used to mark (*they*) *two*. The suffix -wa seems to be 'exclusive person', used in singular to mark *he, she*, in the dual to mark *you (not us)*, and in the plural to mark *they (neither you nor us)*. The -na would perhaps be the exclusive marker in the Ngiyamba set (ŋa-jani-na), here used as exclusive singular -na, *not I, therefore you*; dual *not you with me but he and I*, while the first plural is to be sought elsewhere.

In the Northern Kimberley languages there is a regular but different system of building up, in which the singular-plural contrast is basic, and the dual and trial are marked by suffixes to the plural. To take Worora as an example:

Singular	Plural	Dual	Trial
1. incl. -	ŋari	ŋari-ndu	ŋari-uri
1. excl. ŋaju	ari	ari-ndu	ari-uri
2. ŋundju	njiri	njiri-ndu	njiri-ŋg-uri
3.i. in-dja,awa	ar-ga	iŋ-g-andu	iŋ-g-uri,aw-uri
3.ii. in-ja,njguŋga			
3.iii. g-awa			

There is also *awa-ndu*, *they two*; class of noun complicates the situation, but the basic indication for dual (-ndu) and trial (-uri) is clear. These numbers are indicated by suffixes in a predominantly prefixing language. In the Victorian languages in which dual and trial are indicated, suffixes also are used, but these are entirely suffixing languages. The first two pronouns in Worora are of CA (or probably WD) origin. Other NK languages are constructed similarly to Worora, though there are significant variations.

#### 4. MORPHOSYNTACTIC HISTORY IN AUSTRALIAN LANGUAGES

##### 4.1. Basic Concepts

One of the outstanding weaknesses in the study of Australian languages lies in the field of syntax. This fact was brought out by Dixon (1976b:413-14). The frequent absence of text material in a given language is undoubtedly one of the reasons for this weakness. With the recognition of such a weakness the present author is in complete agreement, for it has long seemed to him that such a study can provide much understanding of the present structures of the languages, as well as their present-day syntax. It seems clear that a process of crystallisation has operated on an originally free word order in the utterance. Such a process would not only result in a stricter syntax, as found in many of the modern languages, but would also account for the peculiar morphological complexities of some verbal systems, especially in the prefixing languages as against the suffixing, and the incorporation of pronoun subjects and objects into the verb complex. Even the occasional incorporation of noun objects can be explained on such a hypothesis. For the idea in general see Capell (1956:11-20) and Wurm (1969).

At the present time some languages still allow very great flexibility of arrangement within the clause, although there is normally a variation of emphasis accompanying variant arrangement, as might be expected. In others, there is a tendency for pronouns of subject and object to keep together until they are finally blended into compound affixes to the verb. Where they have both come to precede the verb, they have formed the 'prefixing' group, elsewhere they have formed a sometimes quite complex set of suffixes.

It would seem that originally the Australian verb carried no person markers, and there is a broad stretch of languages in which still the actor (whether noun or pronoun) comes before the verb, which carries as

markers only tense and mood or voice. In some few languages the actor follows the verb and this practice would seem to have been more general at an early stage. It is the placing of the actor after the verb that leads to the abbreviation of the pronoun as a suffix to the verb, thus marking person. The process would have been gradual. In Banggala, for instance, Schürmann (1844:22) mentions that this language still allows of both methods of conjugation.

If such was the process, one would expect to find verbs in which the transitive and intransitive nature would appear in the pronominal endings, if the language is ergative. This appears to have been the case in Garnay (Kurnai) of eastern Gippsland. In the notebooks of R.H. Mathews one finds forms such as *wanga-nadj*, *I hear* and *janga-nadj*, *I go*, as against *juga-ŋada*, *I give* (and incidentally these are all CA roots). In Darginjung also the distinction is made, but only in the singular. If early Australian had only singular pronouns, this may be correct. On the other hand, there came a period in some areas where the fact that \**ŋa-ɖu* could only be an ergative form of the pronoun *I* was forgotten, and the ending *-ɖu* became the first person marker of a verb, as in Wangaybuwan (northern New South Wales) *ŋeraɖu*, *I speak*, which is really *ŋe-ra-ɖu*, *speak-present-I*. At the same time it is possible here to have *ŋaɖu yanaŋa*, *I go* - but this is still an intransitive verb with an 'ergative' subject.

In the Australian case at least, this independence of syntax is of tremendous importance, because syntactic rules developing at different times and in different languages seem to have exercised a great influence over morphological developments, and in turn modified subsequent syntactic patterns.

Perlmutter (1971:87) has set up a proposition that seems to be justified, when he says that (a) phonological properties of formatives have no relevance for syntax, and (b) as a corollary, the syntactic component of grammars does not refer to phonological information. He might perhaps have expected morphophonemic changes across word boundaries, which usually have syntactic origins. However, those two propositions being accepted, it is possible to study Australian syntax before the details of morphology and lexicon. The examples given immediately above, however, make the propositions themselves doubtful, at least for Australia.

The subjects of this section are arranged in the following sequence:

1. Free arrangement controlled only by semantic emphases.
2. Development of a preferred order, either OS or SO being



the controlling facts: the position of V is irrelevant to them. If both S and O are pronouns, the situation is less fluid, for a hierarchical pattern is developed, based on phonology, and S and O develop a fairly close coherence between themselves, without relevance to V.

3. Modified markers are still free forms, but governed as stated at the end of the preceding paragraph. Yaralde and Wiradjuri show two shapes of this stage. Yaralde provides a pattern on which seemingly Yanjuwa and some languages in Arnhem Land and Northern Kimberley built. Waramunga provides a special case of the same development. In Yaralde in particular, ergativity and affix transference have combined to produce, through freedom of word order, a considerable flexibility, e.g.

lag-in adi go:je  
*make-P I basket* = *ɲadi lag-in go:je*  
 = *go:j' adi lakin*  
 = *lag-in-ab go:j-il*  
 = *ɲabi lakin go:jil*  
 = *go:jil-ab lakin*

This list shows sufficiently the possibilities of word order change without more than change of emphasis in a language which is ergative in method and agglutinative in structure.

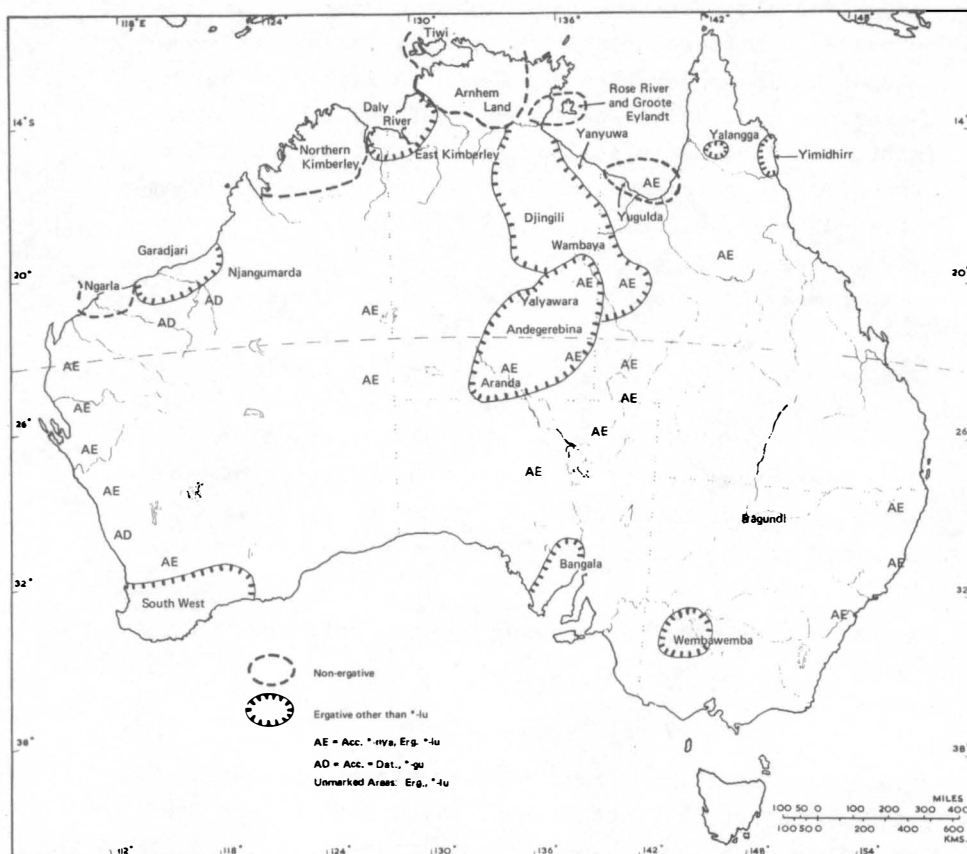
4. Bound markers develop, showing varying patterns, such as

1.  $V + S + O > V(S) + O$

11.  $V + (S + O) > V(SO)$

i.e. bound suffixes formed of abbreviated pronouns, either subject only attached to verb, with object free, or both subject and object bound. There is a third development with use of catalysts (3.8.), combined suffixes hierarchically arranged:  $C((SO)S) + V(t)$ , where t means not only tense but also mood, and the doubly bracketed pronouns show that either order may eventuate - but of course, not both in one language.

5. From this stage arises rigid suffixation as a derivative or shape. There are also examples of incomplete development, e.g. Djingili and Guwamu.



Map 6: Occurrence of the Ergative Construction

The questions that arise from this scheme are concerned chiefly with knowing what determined which type would prevail in an area. Undoubtedly the processes were controlled by the preference for SOV or SVO type of utterance, or any of the other possibilities, some permutation of the elements of each, especially the practice of putting the VP first. It needs to be realised also that a distinction between noun subject and pronoun subject seems to have begun fairly early, and this is rather surprising when it is also realised that pronouns developed non-singular forms at some period quite late after the settlement of Proto-Australian speakers, and in some areas nouns have not developed such distinctions to the present day.

This line of thought leads to another development which is of paramount importance in Australia: the formation of an ergative case and with it ergatively orientated languages. Some believe that ergative languages historically preceded nominative languages, but reasons will appear that make this concept more difficult than the thought that the earliest Australian was nominative, and developed into ergativity at a later period. The problem needs to be discussed next.

#### 4.2. Ergativity

The last general statement ended with the assertion that modern Australian languages are either nominative-accusative or ergative in type. The term 'ergative' is derived from Greek *ergein*, *to work*, *to bring about a result*: it is a process therefore limited to transitive verbs. Some languages in Australia carry a case-ending marking a given word as actor of a transitive action: these usually do not mark the goal of the action. They are at present in the vast majority in Australia. There are others which do not distinguish an intransitive subject from a transitive, and in some cases these also mark the goal of the action of a transitive verb by a case ending (accusative) and are hence referred to as nominative-accusative languages. These are a minority in Australia, but this does not necessarily mean that they always were a minority or that they have developed from an earlier ergative type. An example of each type follows:

1. Accusative language: Ngarinjin (Northern Kimberley)

aru	maRa	ano:n	v.	aru	maRa	nanbun
<i>snake</i>	<i>seeing</i>	<i>I-do-to-it</i>		<i>snake</i>	<i>seeing</i>	<i>it-does-to me</i>

The noun *aru*, *snake* remains the same whether as object or as subject.

## 2. Ergative language: Waljbiri (Northern Territory)

wana -ṅa nja-ṅu      v.    wana -ṅgu-dju ja!gu-nu  
*snake-I see-past*                *snake-ERG-me bite-past*

Here *snake* as actor takes a marker (ERG) -ṅgu,  
 as goal it takes none.

The second example is typical of an ergative language. It happens to be chosen from a language in which affix transference takes place, so that the subject (-ṅa) is transferred from the verb (ja!gu-nu-ṅa) to the head word of the sentence (see 3.5.). This does not affect the principle of ergativity.

In Australia the ergative marker is usually shared with either the instrumental or the locative case, and there may be history involved in this choice. It does not call for examination at this point, but because of it, it is sometimes argued that the verb in an ergative sentence is passive, e.g. *by me the snake is seen*. This is possible in Indian languages but wrong in Australia, and at least in some cases demonstrably wrong for Caucasian languages also. In Australia ergative languages do not have a passive formation - some accusative languages at least do. The Russian linguist Bokarev (1959:60-2) was very emphatic that ergatives are not passives. In his grammar of Gunzib, a northern Caucasian language, he says: 'Ergative construction is not passive...in Gunzib, the ergative case does not coincide with the instrumental: the ergative ends in -l and the instrumental in -d; the ergative serves exclusively to express the subject of a transitive verb', and he proceeds to give examples that seem quite conclusive. One warning must be given: some languages such as Mullul-Mulluk on the Daly River, have a suffix that marks the agent (in this instance -waṅ) whether the verb is transitive or intransitive, e.g. *alalk yikpi-waṅ kaptararma, child little-agent plays around*; and *alwar-waṅ akana mul nuntano, woman-agent does/did not ask him*. Such a language is not ergative. It is taken in this present work for granted that an ergative is not passive: the author prefers to follow Bokarev in calling it 'neutral' as regards voice.

The limitation of an ergative to past time occurs in some languages although in Australia this is rare. Blake (1976b) has pointed to Alawa (eastern Arnhem Land), Galgadungu (central Queensland, where the non-past has the agent in the nominative and the patient in the dative), Bandjalong (north-east New South Wales), while in Yugulda (Gulf country, Queensland) the ergative is not used 'where the goal has not been achieved'. Even in Western Desert languages such as Waljbiri and

Bidjandjadjara, some verbs such as *speak* are used with the same limitation. Blake then adds: 'Logically, the patient of a verb in the future, conditional, etc. is not affected by the activity described in the verb'. Yet at the same time, the absence of an ergative construction does not automatically mean that the language has a passive voice. In some Northern Kimberley languages one would say, e.g. *the canoe made itself at me* as equivalent for *the canoe was made by me*, the agent going into the locative and the verb into the reflexive.

On the Daly River the Murinbada language is a true ergative language in that there are no signs of a passive marker. This means that many of the Australian languages are what has been called by K.L. Hale 'pseudo-ergative', as the verb in an ergative sentence usually carries an -l- transitiviser (see 4.5.4.) that looks like having been earlier a medio-passive marker. Thus, Hale would hold, it is possible to demarcate three language-types in regard to this feature - (1) non-ergative languages, (2) true ergative languages and (3) pseudo-ergative languages. It has recently been argued by Dixon (Dixon, ed. 1976:9-12) that it is not quite a question of ergative-or-not: there are gradations of ergativity to be found in different parts of Australia. Reviewing the papers on ergativity collected in the volume, Dixon says: 'There is surely too much attempt to force each language into a straight-jacket of "strictly ergative" or "strictly accusative" deep syntax. Silverstein's pioneering work on hierarchies (paper 6 [in this volume]) was unfortunately not available for precirculation to contributors; he shows that surface "ergativity" proceeds on a sliding scale, rather than in terms of absolute pigeonholing, and it may well be that Silverstein's ideas could be extended to provide a more fluid and appropriate typology of deep syntaxes'.

In form, there are quite a number of ergative markers in Australia but the commonest is \*-lu which apparently started from one area and spread. There is a locative ending also which is very similar, \*-la, seen, for example, in the non-ergative Ngarinjin (western) *mandja-ra, on a stone*. The two suffixes have a number of allomorphs in common:

Ergative	-lu	-ŋgu	-mbu	-njdju
Locative	-la	-ŋga	-mba	-njdja

(Hale 1976b). In the article referred to here, Hale seeks to lay down phonetic rules for the occurrence of these allomorphs, and no doubt these are correct, but actually they are more than phonetic rules, for they point back to ancient final consonants of the stems to which they are attached, and these forms have led the present writer to posit

final consonants for Proto-Australian roots: he has generally been led by the form of these suffixes to posit a final -ŋ for a root which in modern languages takes -ŋgu/-ŋga, etc., e.g. \*mula-ŋ, *nose*. In many languages, especially in Victoria and other parts of eastern Australia, such finals are still present, but there are cases in which the consonants are lost but the ergative forms of the roots take one or another shape that a final vowel would not imply, i.e. a root may take -lu where there seems no justification for it. It is easier in such cases to presume that the original root ended in a certain consonant than to work on the basis of the elaborate phonological rules Hale suggests. These may be perfectly right as concerns the historical processes, but they point back finally to certain earlier shapes of the words concerned.

In some cases results are interesting. A language may show variant forms not expected, e.g. in Dharawal, on the south-east coast of New South Wales, -lu is not found but -dju is present after a final palatal consonant preceded by a low vowel; in addition there is -ji after a final vowel instead of \*-lu, -ŋga after a velar nasal, -la after final lateral (Capell 1969:51). In the historical setting, such variations can be of interest: the CA root \*baduŋ, *man* has an ergative wadi-lu in a few WD languages, but wadi-ŋgu in others: the one ending is secondary, the other primary; the final velar nasal will have been lost before the word came into a given language, where only final vowel was permitted.

In the Arandic group of languages a final -u becomes -a as an allomorph, so that -lu appears as -la in Aranda, while Aljawara uses -ila. Apart from such allomorphs, however, there are other ergative endings that are not cognate with \*-lu. Blake lists certain of these, e.g. Murinbada -te/-Re, Njungar -ag, Ba:gundji -wa, Wik-Mungkan -aŋ. It would thus seem that ergativity was present in Australia apart from the EA and CA languages as a whole, and took on various means of expression. Examination of each in its setting would be necessary to produce a final decision and this is not possible here. The areas in which ergatives are limited to perfective verbs would also need study from a comparative point of view, but this also must be overlooked here. There is finally an ergative ending -ja which is practically limited to pronouns, and of this a few words will be said in the following section. The only language in which -ja functions as ergative with nouns seems to be Yugulda.

The writer has argued previously that Australian languages were originally not ergative, but that the process of history has led to development of ergativity. Hale and others, on the other hand, have

held that ergativity was primitive and has been lost from some of the languages. The question is of historical importance, and a further study has led the writer to change his view to the extent of saying that they may have been ergative, although, of course, this is a view that cannot be historically proved in the absence of documentation. Experience elsewhere, however, suggests that there is more than one type of ergativity. There is the type in which the ergative is used with all transitive verbs, but another type in which it is limited to past tenses. Gilbert Ryle (1949:149ff.) has spoken of 'verbs of achievement' and these are the types of verb that require an ergative in such languages. If the action is completed, the subject goes into the ergative. If it is in process or future, the ergative is not required. This type of construction is found in parts of Australia and in other areas of the world as well. It seems appropriate to a language in which the construction is either not developed or is going out of use - the latter more likely. If Australian languages may be regarded as originally ergative, but in some regions losing the quality, this could well be a stage in the process of loss, and it seems more likely than a gradual development of it. The author is therefore inclined to feel that the Australian languages as a whole may have been ergative, but have lost the construction.

It is noticeable that the oldest recorded languages were ergative. This is so in the Middle East, in the case of Sumerian and Hurrian. It is still so in Basque, Eskimo and the Caucasus. In America the languages do not show any trace of original ergativity. In PIE also there is no such tradition, but the Indo-Iranian languages have a construction with the passive participle which points rather in that direction. In Sanskrit it is possible to say *mayā kanyā dṛṣṭā*, *by-me (was) the girl seen* for *I saw the girl* - and here the construction is rather emphatic (Pirejko 1968:61 *et passim*). Australian could well have developed rather similarly, but one cannot definitely claim that this is what happened.

#### 4.3. Case Formation in General

Case marking in Australian languages is not universal. In the NK languages it is possible to regard at least some of the case markers (in their functional sense) as independent words, and in Worora and Unggumi amongst these languages such markers can be subject to being marked for class. In Gunwinjgu there are a few prepositions, such as *guRe*, *at*, and *jlman*, as: *guRe gunRed*, *at the camp* and *jlman gunwaDe*,

*like a stone*. In the case of Worora and Unggumi, the fact that such a postposition as *nanga*, *of* is really a noun governing the preceding noun, stands out clearly. Two examples in Worora will show this:

(1) if a noun is involved in a possessive expression, such as

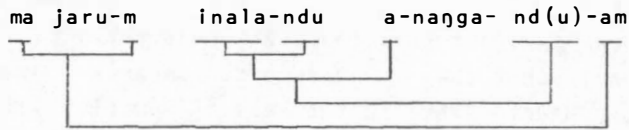
djuwalja a-nanga-ja  
*paths he-poss-plural*  
*His paths.*

then *nanga* is preceded by a Cl. I prefix, and takes the plural indication of possession, referring to the plural noun *path-s* as a suffix *-ja*.

(2) If the possessed and the possessor are of different classes, the former is marked on *-nanga-* by a prefix, and the latter by a suffix (as *-m* for Cl. V) while the number of possessors is marked by a suffix preceding that of the class, as *-ndu*, 'dual', thus:

ma-jaru-m inala-ndu a-nanga-nda-m  
 Cl.V.-house pupil-two Cl.I.-poss-dual-V.  
*The house of the two pupils.*

Diagrammatically, something like the following might represent the scheme:



which serves to make clear that originally *-nanga-* had complete independence of status, whether as noun or (more likely) adjective.

It is not hard to think of later case endings in other parts of Australia as being postpositions, at first free, and only later bound. In many cases no doubt morphophonemic changes have taken place, as indeed they still do - e.g. East Ngarinjin *mandjan da*, *on the stone*: West Ngarinjin *mandja ra*, where there is no final consonant to influence the form. The other Northern Kimberley languages sometimes show similar forms without influence from the classes: Ngarinjin, *aRu nanga*, *man's*, Cl. I. but *wonay nanga*, *woman's*, Cl. II. The latter would be in Worora *wonay njananganja*, still variable for class. Very occasionally one finds both preposition and a case ending together, as in Madimadi (Victoria) *gunda gaḡa-ba*, *under stone-oblique* (Hercus 1969:182). It seems thus possible that morphemes that subsequently became postpositions or case endings earlier had some form of freedom.

In general the case system as such in Australian languages is fairly consistent throughout. In most of the languages there are possessive



and dative cases, ablative and locative. If the language is ergative there will be an ergative case ending. A nominative marker is very rare, but there is a set of such in Yugulda, and this is one of the features that set that language apart in the way that is discussed in an earlier section (3.3.4.1.). Blake (1976b) states that the suffixing languages have from about four to eight cases, occurring with nouns, pronouns, adjectives and demonstrative pronouns and adjectives, and illustrates from Galgadungu in western Queensland:

madjumba-*aṅa* jabadjara-*aṅa* tjaadigaja-*aṅa*  
*kangaroo-to*      *lively-to*    *these-dual-to*

It will appear later that there is not always the use of the ending on each member of a phrase, but that customs differ in this regard (see following section). Blake's count includes nominative and ergative, apart from which there may be an accusative, frequently limited to animate or even personal nouns and pronouns, a genitive, dative, locative, allative and ablative. Von Brandenstein has also written about an abessive in Proto-Australian (Von Brandenstein 1965:647-62), and later mention will be made of this.

It is needful to distinguish between form and coverage of cases, and this is not always easy. In seeking the history of developments in Australia it is especially difficult to do this, because there is no evidence to trace the history of a usage or of a case form. Blake's tables do not suggest that any set of case markers is either EA or CA, much less goes back farther in history, and it is wiser not to try to establish more than the principle of case marking as part of Proto-Australian speech. Even this is not easy, and it has already been shown that a time can be visualised when free forms had not become bound forms at all. In fact, some morphemes that are fairly commonly fixed at present do not seem to have been so in the past. The bivalent suffix *-gu* is such (Capell [1956]/1962:77-79; Blake et al. 1976). The bivalency concerns the type of root with which the ending *-gu* is used. This is either nominal or verbal. In the former case the basic meaning is *for*, or *to*; in the latter it marks a decision *for* action or *to* act and thus it becomes either a purpose or futurity marker in the verb.

It is desirable to make some mention of indicators of *having* and *not having* or *with* and *without*, since these are present in almost every language of Australia. Sutton (1976b:299ff.) remarks about the 'propriative affixes' that they 'show reasonably high cognation, while privative affixes do not'. This may imply that the former were evolved

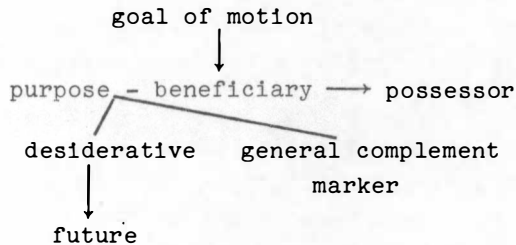
at an early stage of language in Australia, while the negatives of them were not evolved so soon. He proceeds to give lists of fifty languages and their forms of proprietive affixes, and summarises them by the following list of proto-forms:

- \*ji ~ ɟi (alternations probably morphophonemic)
- \*ri (commonly flap or trill, also R)
- \*(m)(b)a interpreted as ma- ~ ba- ~ mba-
- \*wa
- \*ga
- \*ra (flap or trill)
- \*ɟa

The list might conceivably be shortened by bringing some members together: ra and \*ɟa, ji, ɟi and ri, Rɪ could coalesce at an earlier period. Dixon as rapporteur in the pages following makes some suggestions and further analysis (Dixon 1976a).

Von Brandenstein's paper on the abessive, already mentioned, makes a good case for such a form as common Australian. The most detailed evidence he gives is concerned with Meyu (Gaurna), on the Middle Murray River, but he cites quite a number of other areas in other parts of Australia, viz. Ranjbarngu, Dalabon, Ga'angulu (Queensland), Waga (Queensland), Bandjalong, Wiradjuri and Dharawal (New South Wales), Ngarluma, Njangumarda, Mangala, Djaru, Jangman (Western Australia), and southern Victoria. If the claims can all be accepted, there seems to be a real case for an abessive. The form, however, leaves something to be desired: it is \*dji, in von Brandstein's spelling -t'i. This immediately becomes ambiguous with the commonest form of the proprietive! So something further needs to be said about the presumed abessive. After all, the proprietive with a negative verb would produce the affect of an abessive.

The marking of possession, including genitive case forms, needs separate attention. The bivalent suffix -gu is not only a marker of dative, but is widely found as a possessor marker also. 'Quite a number of Australian languages use the dative to mark their possessor in a possessive construction. For example, in Bidjandjadjara we find wadi-gu baba (*man-DATIVE dog*), *the man's dog*. In other languages a separate genitive suffix is used to mark the possessor' (Blake 1976a: 422). On the following page, Blake has a diagram setting out a presumable scheme of development of the uses of -gu:



to which he adds a final comment: 'The fact that *gu* appears in different morpho-syntactic slots in different languages...may well reflect an earlier stage when *gu* was a free (probably adverb-like) form'. This is undoubtedly correct, and case endings in general may be of a similar origin.

The possessive construction as a whole is much more complex. It is dealt with in Capell ([1956]/1962:66). In many languages pronominal possession is marked by suffixed pronouns, abbreviations of the cardinal pronouns. Sometimes these are subdivided into classes: in the NK languages and some others, body parts take prefixes, which are almost the same as the subject markers to verbs; kinship terms take suffixes which are equivalent to indirect object markers to verbs and all other nouns use the marker *-nanga*, added to a pronominal base: Ngarinjin *ni-oru*, *my ear*; *yid-nanga*, *his or her father*, *jindaŋi-nanga*, *my spear*. In other areas, such as Victoria, pronominal suffixes are added to nouns in general: Madimadi *galg-eg*, *my spear*; Djadjala *gadigadim-ara-galig*, *spear (belonging to) us three (excl.)*. Where nouns alone are concerned, it is frequently a case of A's B, or B A-*of*; but occasionally there is a double possession: *man-of boomerang-his*, Djadjala *wudju-ga gadigadim-ug*, Dharawal *juwinj-guli warangan-ŋaŋ*. The order may be reversed, but the correct endings must occur on the correct word. It is doubtful whether any one form of genitive is universal: it is again a matter of historical stages, which cannot be worked out in full here.

In summary now it may be suggested as a historical view, that (1) the earliest Australian languages probably did not have case systems at all. They sometimes used prepositions, it would seem, but the evidence is far too meagre for any positive assertion. The occurrence of such forms in Arnhem Land and Victoria (Gunwinjgu and Madimadi) suggest this, and form another link between extreme north and extreme south, which is to be investigated in a later section.

(2) The EA languages seem to have used postpositions which originally had independent meanings, but later became simple case endings, with significance in a syntactic setting rather than meaning in a lexical setting.

(3) These case endings, as they finally became, show considerable variation from area to area and may help in later research to identify grades of EA, some of the steps between EA<sub>1</sub> and EA<sub>n</sub> which can only be suggested at this stage. They can be defined only by a detailed study of lexicon, which lies outside the present scope.

(4) The problem of the priority of nominative-accusative languages over ergative languages also requires more study. While it seems to be in Australia a case of spread of ergative case systems, probably from one central point - as suggested by the prevalence of \*-lu forms - this is far from certain, because other endings are found in some parts of the continent. The author's feeling is that \*-lu is a WD legacy, which replaced other endings as the WD languages (CA languages to be exact) advanced eastwards: yet the ergative as such is prior to this spread.

#### 4.4. Number in Nouns and Adjectives

Number seems to have developed first in pronouns, although even there it is not an element of the earliest EA groups. It has already become fairly clear that number developed in pronouns in different ways in different languages, and that it came latest in the CA languages in the western WD languages. To the present day, however, there are no formal plurals in quite a number of the languages, so that it can safely be said that number indication in NP is comparatively late. Moreover, there is very little agreement in the shapes of formatives, so that it cannot be said that any one method of indication is 'primitive'. What is more regular is to find a dual number as well as a plural: this nearly always involved suffixing \*buladj, *two* in EA languages and \*gudara in CA languages. Number indication as such, however, is very early in some parts: Victoria has not only dual and plural indication, but also a trial form which has been discussed under Pronouns (3.4.). Yet the languages in north Australia that link best with Victoria, although they do indicate trial as well as dual, do not use the same indicators as those in the south. The latter - so far as they have this system - indicate dual by \*buladj and trial by \*galig, but this is not the case in Arnhem Land or Northern Kimberley. In the latter, the forms are suffixal as in Victoria, but vary in

shape: Worora dual -ndu, trial -(ŋ)guri, apparently also in Unggumi, in Umida and Unggarangi, -du and -geri, but in Ngarinjin -diri and -(ni)na, Wunambal -mija and -na, as also in Gwini. These are involved with local forms of the numerals, which cannot be discussed here. But the Eastern Kimberley languages differ in their forms. There is no trial, but nouns fall into two classes, Cl. I ending in -in and Cl. II in -l, but both forming a plural in -m. In place of this the dual of both has -warin. In Arnhem Land methods of indicating plurals vary immensely, and though duals are usually present (often forms of the cardinal numerals), trials are not. Specimens of these formations can be seen in Capell (1942) *passim*. The use of \*galig as ending for tribal names has been already discussed (3.4.): it is found in the -bal of 'Wunambal' apparently in complete isolation, a remainder of whose history nothing can be said.

In brief, number indication is by no means universal in Australia. It is absent from such areas as the Daly River - so far, that is, as nouns and adjectives are concerned, and these generally show themselves to be early in the EA list. It would seem to have developed first in pronouns. In many languages, number indication in NP is done by means of affixed pronouns in VP, and this is probably a later development to clarify references within the utterance as a whole. Trial number can also be a paucal plural in Victoria, but does not seem to have this extension in the NK area, although it may sometimes have it in Arnhem Land. A summary of forms, together with some local detail, is given in Capell (1955/62:61-3).

#### 4.5. Case in the NP

In phrases, as against single words, two types of concord are found: one in which only the last word of the phrase takes case markers: this will be called group declension, and one in which each word in the NP takes a case ending in parallel with the others. This will be called parallel declension.

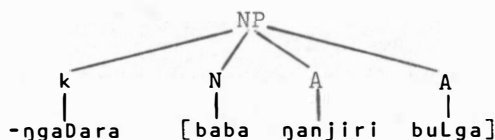
##### 4.5.1. Group Declension

Group declension is the term used to indicate a phenomenon in which any marker is used only once in a phrase, usually on the final element, as against its recurrence on each unit of the phrase. In English, *in a good house* is a phrase; in Latin *in bon-a dom-u* contains an ablative case marker required after *in* on both noun (-u) and adjective (-a), and the two markers in this case are actually not morphemically identical.

In some languages such a case marker would be required only on the final unit: *in (a-good-house)-loc*. Some Australian languages exhibit this feature. In Waljbiri and other WD languages (of CA type), *narga njambu*, *man-this*, as nominative with an intransitive verb, ergative *narga njambu-!u*, *man this*, with a transitive verb. In the neighbouring Bidjandjadjara,

baba njanjiri bulga-ngaDara  
*dog wild large-for-fear-of*

In each example the case marker appears only once although referring to both units. The tree diagram which sets this out would be of this nature:



which would need a transposition of *k* to the final position and a means of indicating that it refers to each unit of the phrase though used only once. If the word order is changed, and the unity broken for any reason, group declension ceases and the case marker must be repeated. A Waljbiri example will make this clear:

*narga njambu-!u gabi wawiri bandi-ni*  
*man this -ERG FUT kangaroo spear-NON-PAST*  
*This man will spear a kangaroo.*

This can be stylistically varied to become

*narga-ngu gabi wawiri bandi-ni njambu-!u*  
*man -ERG FUT kangaroo spear-NP this -ERG*

where *-ngu* is an allomorph of the ergative suffix. The whole has the same general meaning but with a different emphasis (Hale 1973).

#### 4.5.2. Parallel Declension

In parallel declension, each element of an NP takes the case sign. Thus in Murawari

guNunj-dja bidala-nga  
*coal-on good-on,*

for example, [The fish is cooked] on good coal(s).

me:n-gu durda-gu mall  
*man-of big-of boomerang*  
*The big man's boomerang.*

Once again there are areas in which each type of declension is predominant. It is particularly noticeable that sometimes an embedded clause may take an adjectival case marker in a way that is not possible in English, as in Murawari

minjan (dadira-ji-ju)-gu  
*what (drink -can-I) for*  
*What is there for me to drink?*

The embedded verb is to all intents and purposes a noun: it can syntactically be treated as one and take a case ending.

It also occasionally happens that case endings, in retaining individuality, can be combined with each other in certain specified groups, e.g. in Murawari

danj deri-mi-ya diyawi-mi-na (mayi-nga)-gu  
*hither back-it-comes turns -round (ground-on)-to*  
 wara-numbu mugu-nga bi:bun-gu buŋgi-la  
*falls-it inside-at cotton-bush-of flower-in*

i.e. *on to the ground* and *in to the flower of the cotton bush*.

This combination of case endings is very rare. It occurs in Bilua, of the western Solomon Islands, and it occurs - like group declension - in Sumerian, one of the oldest recorded languages of man.

#### 4.5.3. Cumulative Declension

Cumulative declension is a name that may be given to a special type of declension found in comparatively few yet widely scattered languages of Australia. In this type, some case serves as a base on which other cases are constructed by an additional suffix. In Gubabwiyngu of north-east Arnhem Land, for instance, while *to me* is *ɲara-gu* (which also serves as *my*, as in *balaʔ ɲaragu, my house*), if *my* is used with a noun in an oblique case, the stem for *my* is not *ɲaragu*, but the dative *ɲara-gala*, *to me* to which first *-ɲu-* and then the appropriate case ending is superadded, e.g. *ɲara-gala-ɲu-bili, at my...*, e.g. *balaʔbili ɲaragalaɲubili, at my house*.

In Gubabwiyngu this type of declension is limited to possessives used with nouns in oblique cases. Thus, *my father* is *baba ɲaragu*, but *of my father* is *ɲara-gala-ɲu-wa baba-wa*. Here *ɲara-gala* is *to me*:

when the possessive is used as an adjective in an oblique case the dative *ḡara-gala* serves as the base, to which a set of suffixes is added, to a lengthened base *ḡara-gala-ḡu-*. In the dative *to my...* the case suffix is actually doubled but in a phonetically somewhat different form: *ḡara-gala-ḡu-wala*; other final case endings are unchanged. The ergative is *ḡara-gala-ḡu-ji*, as in *ḡaragalaḡuji babaji*, *my father (did so and so)*. Sentence examples are seen in the following: *ḡaji dja:!* *waḡa-narawa baba-wa ḡaragalaḡu-wa*, *he wants to speak to my father*; but *waḡanarawa ḡara-gu*, *to speak to me*; *ḡara naḡala nanu-galaḡu-na bala'na*, *I saw his (her) house*; *dunaba-ḡuRa ḡaragalaḡu-ḡuRa miriḡu-ḡuRa*, *in the presence of my enemies*; *ḡaragala-ḡu-ḡuRa bala'ḡuRa*, *from my house*. No suggestion can be offered as to why this cumulative declension of possessives has arisen, but the facts are as stated.

A somewhat more complicated kind of cumulative declension was present in Awaba, Lake Macquarie district, Newcastle, New South Wales. Here nouns are divided into two main groups: common and proper, the pronouns forming parts of the proper noun section. The language has a system of classification of nouns (for which see the paper on the classification of nouns in Australia, later in this volume). In Awaba, declension by simple suffix covers only the ergative and dative cases (which may often be formally one) and the ablative, common *-din*, proper *-gay*, *from, on account of*; all the rest carry double suffixes whose true nature is often difficult to identify. There seems to be some sort of vowel harmony at work. Thus ergative *-du*, and locative *-duwa*, but personal locative (*with a person, near a person*), *-ga-ba* and not *-gu-ba*. The two sets of suffixes are shown in the following table, in which the case names are those introduced by Müller (Müller 1882, II, I:5ff.).



Table 14: Cumulative Declension in Awaba

Case	Nouns		Threlkeld's Spelling	
	Common	Personal		
Nominative	(no fixed ending)			
Ergative	-du	-gu	-to	-ko
Dative	-gu	-gu	-to	-ko
Locative I	-du-wa	-gu-wa	-toa	-koa
Genitive	-guba	-guba	-koba	-koba
Locative II	-ga-ba	-gin-ba	-kaba	-kinba
Abessative	-da-biruŋ	-ga-biruŋ	-tabiruḡ	-kabiruḡ
Adessative	-ga-gu	-giŋ-gu	-kako	-kiŋko

The pronouns in this system are suppletive: nominatives work on stems different from those of other cases - which means that they probably have entirely different linguistic histories. Most of them have two stems in the singular, but one with phonemic variation in dual and plural thus pointing to a later development of non-singulars here as in other parts of Australia. The forms are as follows:

	Nominative	Other case stems
Singular	1. ɲa-du-wa	emowuŋ
	2. ɲin-du-wa	ɲirowuŋ
	3. m. ɲju-wu-a	ɲigu-wuŋ
	3. f. buwun-du-wa	buwun-nowuŋ
Dual	1. ba-li	ɲa-liŋ-gu
	2. bula	bulun
	3. buluwara	buluwara (guba); bulun(ba)
Plural	1. ɲe-en	ɲearuŋ(gu)
	2. ɲura	nurun
	3. bara	barun

The historical implications of these forms, especially their obvious connection with Ngarinjin in the Northern Kimberleys, has been discussed earlier and will need to be referred to in the next section, so that no discussion of them will be given here. It is to the second forms that other case endings - those of the Personal Nouns series - are added, e.g. emowuŋginbiruŋ, *from me*. The inflected forms of the plural pronouns are obviously derivatives from the nominatives, whereas

those of the singular pronouns are not, and this strengthens the idea already put forward that plural pronouns in Australia are late historically. Full historical analysis cannot be entered into here: it needs a separate paper.

Apart from these examples of cumulative declension, the syntactic pattern in Awaba is that of parallel declension: noun and adjective take the same case endings when they are semantically connected. An example is *dira-gu ŋiguwumba-gu*, with *his teeth*; here *his* is already compounded as shown above. Again, Threlkeld's (1892:133) translation of Luke 2:32, *kŭri ko lthārael ġiroŭmba ko* (= *guRigu ldirael ŋirowumbagu*), for *his people Israel*. This usage contrasts with Wiradjuri *irangun duradu*, with *his teeth*, where only the final word of the phrase takes the instrumental ending *-du*.

A full historical grammar of Australian languages would be necessary to show how far these three types of declension are spread, and this cannot yet be written. The connection, however, between north and south that has appeared in this brief study, is quite important and can no doubt be filled in, in a wider study.

#### 4.5.4. Transitivity

The distinction between transitive and intransitive verbs is of considerable importance in Australian languages. It is at the base of the distinction between nominative and ergative cases. Most of the distinctions rest on semantics, but there are some morphological indicators of transitivity. In general these indicators are language bound, but there is one at least which is widespread. This is *-l-*, which is added to the final phoneme of the verb stem, and is followed by a vowel. Some discussion of this *-l-* suffix is called for. It was mentioned and developed to some extent in Capell (1956/1962), and there is a discussion in Breen (1974:28ff.). Capell regarded it as a gerund, a verbal noun, used as a means to extending the action of the verb.

Evidence from Donaldson (1976) is also to be added. All these studies suggest that the original treatment by Capell and Breen was basically correct, with one limitation: *-l-* by itself is not a noun formative but is used only in combination with (1) an auxiliary verb and (2) another case ending to the gerund. Of the two uses *-l ma-* is common in many languages of eastern Australia in the role of causative verb formation, while *-l-gu* marks future time not only in eastern but also in western Australia. Actually this is one of the cases in which we seem to get a 'look behind the scenes' in the history of the

formation of language in Australia. The present section of this study is therefore essential both to explain the usage of the -l- and to take the history of these languages back one stage further.

There is a third usage which is commoner in the western regions, and that is that -l- forms the base of a transitive against an intransitive verb. In these cases it is added directly to a verb stem, not to a stem which is to be compounded with an auxiliary to form a derived verb. The evidence suggests that as this usage is commoner in WD languages, which are mostly CA in status, it would seem to be later than the other uses, and so again serves as a time indicator tending to mark the comparative lateness of the WD languages as a whole and hence of the CA stratum.

The starting point is the proposition that -l- is a gerund marker or formative. The instances given in NAAL seem to make this clear. They can be reviewed briefly.

#### On the Functions of -l-

NAAL, 67: (-l- as gerund formative)

In Dharawal the -l- is added to link a root with an auxiliary; in central New South Wales it is added to the auxiliary to link the tense and other suffixes to the latter. These are the New South Wales uses:

Dharawal bu-l ma-i-a, *hitting he-brought-him*

Wiradjuri bu ma-l-awan-ni, *strike causing-present strike*  
causing-immediacy-past, *I was striking just now.*

bu ma-l-ŋari-n, *strike cause-this-morning-I.*

It is used along the coast only in Dharawal, i.e. it is inland Yuwin but it does occur in Awaba and has special uses there. It is found also in Gogay.

In WA -l- appears as one of the verbal affixes:

1. -l-ba, *far or historic past*
- ii. -l-gu, *intention*

Garadjari djinga-l-gu-li, *killing-for-we-two, let us two*  
*kill him, we two are for killing him, we two*  
*kill him.*

Glass and Hackett (1970), 'punctiliar l'.

-l- with gidja, imminent	-g dja
gidja-munu-ɖu, negative future	
djara, cessative	-djara-

bayi, habitual	-bayl-
djagu, purpose	
djagu-munu, inability	-dja-gu
djagu-djara-du, <i>lest</i>	
djiradja, <i>unfulfilled desire</i>	-djira-dja

Even here it is only 1st conj. and purpose requires -dja-gu, not -gu. In Waljbiri the -l- forms are consecutives.

Kabi, J. Mathew's 'verbal noun' yeli:nba, *calling* looks like yelli-l-ba with dissimilation.

\*-li- marking a middle voice, realised usually as reflexive but sometimes as passive.

Djiringanj present -li-ma; past -li-ba; (future ya-bala) reflexive.

Lardil: -yl- passive.

Gogay: -ilana, reflexive

Awaba: gl-l-

Murawari: -ri-

Dharawal: -il(i, ya, a)

There is, then, a distinction between languages in which -l- is a simple formative added to a stem, and languages in which it is still a formative, but conjoining two stems, such as a verb and a noun. There is also a third type of case, that instanced by Wangaybuwan, in which the formative is added not to the basic root but to the auxiliary. This is similar to the usage in Dharawal, of the type of bu-l ma-.

In Wangaybuwan, a similar formation would take the shape of \*bu ma-l-.

It would seem that the more ancient usage is the simpler one, i.e. the gerundial. Yet the same formative can be added to a simple stem to form, e.g. -l-gu, a future marker to a simple verb. It thus joins the ranks of bivalent formatives, and this is the point of Breen (1974). In the process, it raises the question whether there may not be other such bivalent formatives, and such would carry the history of the formation of Australian languages back a stage further.

There is a noticeable phonetic feature in all these cases: \*-l- seems to remain as l, not undergoing phonemic transformation; the ergative marker \*-lu can be modified into -ni, -yu, etc., but the gerundial -l- does not do this.

Breen (1974:22-59) suggests the possibility of reaching behind existing Australian languages to an earlier stage in which grammatical organisation was still incomplete. Later formatives, case and other endings may have begun life as independent particles which were not limited to one category of word, but could be bivalent or even

multivalent. This could not, of course, be proved categorically but only within the range of likelihood.

Breen, then, enlarges the definition of bivalent affix to be 'stem forming or inflectional affix which combines with noun stems and with verb stems and/or abstract nominalised verb stems (e.g. participles)' (p. 50). The whole of Breen's paper is really only an expansion and elucidation of this proposition, but it seems to be substantially true, although the examples are all taken from living usages in modern languages. They do, however, point to a time when the existing fixed usages were still in the course of formation, and thus seem to conceal or partially reveal historical processes which are difficult to state with any degree of security at present. Yet similar processes can be seen in some of the ancient languages of the Middle East and elsewhere.

#### 4.6. Historical Development of the Noun Phrase

The points to which attention should be given in regard to the noun phrase (NP) are five:

1. Absence of number marking and the stages of development. The historical aspect of a numeral system in Australia would be included here.
2. The absence or presence of an ergative system - and perhaps also its nature - combined with the presence or absence of a passive in the VP, are matters of some importance historically.
3. The loss of a passive (if such was the case) along with the development of the ergative system needs to be examined.
4. The case systems in Australia (starting from absence of a formal case system, or its virtual absence, as in the NK languages) need to be considered, together with the fields of group declension and parallel declension.
5. Classification in nouns: this is the subject of a separate paper in the present work.

These are all developments within the NP that may be expected to have historical importance. However, the parallel development of the VP is interconnected (especially in regard to ergativity) with that of NP. While each must be studied separately, both must finally be woven into one in the tracing of history.

## 5. THE VERB PHRASE

## 5.1. Theoretical Development of the Verb Phrase

The standard study to date on the construction of the Australian verb phrase - both syntactically and morphologically - is that of Wurm (1969). The historical aspect of this study, as well as of the present one, is the assumption that grammatical structure in Australia has advanced from simpler to more complex. This seems to hold good in both the noun phrase and the verb phrase.

Verb formations - in the sense of the syntactic order of stem, person of subject and/or object, and other features present actually or by implication in the VP - may be traceable to an underlying syntactic arrangement of S, V and O in the sentence in which the VP plays its part. The VP complex, that is to say, may well be a microcosm to which the sentence as a whole is the corresponding macrocosm.

To illustrate this proposition, let three elements be considered: the source of the event, the event itself, and the goal of it. The symbols S, E and G will indicate these phenomena - the different use of S in this connection needs to be noted. Various syntactic patternings of these elements are possible, of which a language usually chooses one as basic but allows others as stylistic or semantic variations: witness the difference between statement and question in English, and the same with the addition of order in Romance pronouns. But in the verb complex itself the basic sentence pattern of the language usually obtains, the variations are not permitted free interchange with each other. The following table shows the possibilities of arrangement of a three element statement in which each element is morphemically independent. The event (E) is *seeing*, the source (S) is *I*, and the goal (G) is *you*. This brings about:

*I saw you*

S E G

*you I saw*

G S E

*saw I you*

E S G

*I you saw*

S G E

as the usual types in Australia. A pronominal S and G were deliberately chosen in the above examples because complex verbal systems are usually

inflectional, and the elements of S and G are in this case pronominal. Even in such a sentence as *the man saw a dog*, the verb in many languages incorporates within itself an S and a G element, such as *he-saw-it* in *the man he-saw-it dog*, which is a typical Austronesian order. A nominal S is not subject to abbreviation - it may even have an ergative case or other indicator.

Many languages are not limited to a VP in a simple sentence but allow for compound and complex sentences in which a subordinate clause may have a special verb shape such as sentence-medial (SM) or a participle (which in principle is the same thing), or an inversion as in German.

The question is now: where in Australia do such variant patterns occur and with what modifications? Can they be connected with a corresponding sentence pattern in the given language or languages?

For the purposes of the present outline, Wurm's paper of 1969 seems to give the clearest summary. He divided the pronouns S and G into two main groups: free forms and bound forms, crossing in regard to their position *vis-à-vis* the verb itself. They are summarised by Wurm (1969:68-9) thus:

- I. Free forms:
  - (a) Free in syntactic position. Type language: Dugidjaw.
  - (b) Free still but in a preferred order whether before or after the verb. Types: Juwinbara (and most -bara languages); Gungari.
  - (c) Abbreviated or modified person markers still functioning as free form. Type: Narrinjeri.
- II. Bound forms:
  - (a) Short or modified person markers functioning as free forms still retaining possibilities of interaction. Type: Wiradjuri.
  - (b) Fused units which are themselves free forms before or after the verb itself. Type: Waramunga. In this instance S + G is basic.
  - (c) Bound morphemes without abbreviation, added to the final of the verb stem or to catalysts, with a strong tendency to observe an order of 1st before 2nd or

3rd person. These are characteristic of the CA languages of the Western Desert and regions to the east of it. The AT languages are part of this group - and this gives perhaps a historical key.

- (d) Subject markers only are bound and suffixal; objects are free and generally follow the verb. Type: Guwamu.
- (e) The verb forms a complex of bound forms of either (S + G) + E or (G + S) + E type. This is true of the multiple classifying languages and of some others such as Wardaman.
- (f) A rather unusual type where bound forms which are E + (S + G) as in Dharawal or of similar but more flexible type as in Awaba.

To produce order in this rather complicated array of possibilities a map is needed: for this see Map 5. Even this map does not clarify entirely the historical sequences. It would seem that many local influences have been at work.

Working on the presumption that the historical basis of increasing complication is right, the items on the map are arranged in a manner somewhat different from Wurm's. Moreover, what has been said above crosses with another feature of Australian verbs: simple or compound conjugation. The idea may be illustrated from English where it is possible to say *I killed him* or *I did kill him* - this is stylistic only: in an Australian language a verb is either a simple stem conjugated by the method the language chooses, or a compound verb which consists of an invariable verbal stem and an auxiliary which is specified for given classes of verbs. This feature has been studied separately in another paper in this volume (see 'Classification of Verbs in Australian Languages'). This feature does not determine which type a verb will follow in regard to the S-E-G situation; either type may belong to any subgroup.

What type of syntax is implied in each case? What is the underlying structure? Taking S as always pronominal, it would seem that the



following patterns might follow: the symbols S and G are now replaced for the sake of convenience by the more usual symbols  $p_1$  for subject pronoun and  $p_2$  for object pronoun, and t for tense:

	Verb Phrase Structure	Syntax Underlying
1.	V + $p_1$	VS (O) + t
VSO 2.	V + t + $p_1$	VS (O)
3.	V + t + $p_1 p_2$	VS (O)
SVO 4.	$p_1$ + V + t	SV (O), SOV
OSV, SOV 5.	$p_2 p_1$ V + t	OSV

The only pattern not covered here is that of some Daly River languages:

$$\pm VSx \pm VS + S \pm O + VS + t \pm VS$$

in which, according to Tryon, 'the kernel of the sentence, the verb unit, which is made up of the actor (S), and optional object (O), the bound form of the verb stem, plus the tense marking suffix' (Tryon 1971:9). VSx stands for the free verb stem.

When these schemes are applied to the languages themselves, several tendencies are observable in the conjugation types. Taking as material for examples, marked with asterisks because they are purely theoretical, some proto-AN roots, the patterns may be set out as follows, using R = root and p = pronoun:

$$p + R: *n_a + *jan, I go$$

$$R + p: *jan + *n_a, go I$$

and similarly for other persons, e.g. \*nj<sub>i</sub>n, you: \*nj<sub>i</sub>n jan and \*jan nj<sub>i</sub>n. The addition of t, tense marker, using \*n<sub>a</sub> as a past tense sign, gives

$$*n_a jan na$$

$$*jan na n_a$$

for *I went*, the time marker clinging to R.

If the VP is transitive and the language ergative, then a form such as \*n<sub>a</sub>-ja, for example, might be called for, and using the root \*ma,

*take*, the result would be \* $\eta$ aja ma > \* $\eta$ aja ma na or \*ma na  $\eta$ aja, *I took*. A next possible step would be \*mana ( $\eta$ a)ja, and this seems actually to be the case in northern New South Wales, where the root forms of the pronoun were apparently \* $\eta$ an+lu > \* $\eta$ adju and the verb became \*ma-na-( $\eta$ a)dju > \*manadju, of the pattern R + t + p. A transitive, however, presupposes an object. So long as the object is a noun there are no complications, and it comes either before or after the verb. But if it is a pronoun further coalescence can occur in more than one way, as set out in the diagram above.

The relative infrequency of V + \* $\eta$ a(ja) points to a prevailing historical pattern of initial verb in Australian languages and this is borne out for existing languages also. It can be illustrated for many, but it is perhaps rather noticeable that these include languages such as Garawa, already used in this study as an example of aberrant languages (2.2.). On the other hand, the pattern \* $\eta$ a(ja) + V points to a prefixing type language such as those found in the Northern Kimberley and Arnhem Land, and these again prove to be aberrant in vocabulary. They include the Victorian languages, however, which have lexical connections with those of the far north (5.2.).

While the final paterings have remained fairly simple in most cases, there has been development to polysynthesis in some areas, and all this would not seem to have been a straight historical path. The most complicated polysynthesis in Australia is found in Tiwi, which is a language isolate, but the Daly River languages are all quite elaborate. A study of Tiwi polysynthesis will be found in Capell (1967a), where it is shown that the processes involved are exactly the opposite in order to those of Eskimo. In Australia quite a number of languages can form extremely elaborate verbal phrases of this type and the gradation to polysynthesis as the term is used in Amerindian languages is capable of being studied almost step by step. It remains to be investigated whether there is historical order in these gradations, or whether they have sprung from local causes in different areas.

In point of fact, complicated processes of combination are by no means limited to such isolates as Tiwi; among the WD languages, for instance, it is possible to produce a compound such as the Bidjandjadjara

nindi- bu-  $\eta$ ula- nj- -dja- maal- du  
*know-causative-continuity-connective-infinitive-negative-noun*

*teaching*, involving only a verb stem and a number of suffixes; in

Gunwinjgu and many other languages it is possible to involve an object noun in the complex, as in

ɳari- bene- mane- djal-            djarg- gole- manbo-ji  
*we        them for continually together spears-make-habit*  
*We used always to get together and make spears for them.*

.In the far east of the continent Wiradjuri can produce:

ɳu- l- ɳidjllinja-ɳari-    awa-        -giri- -li  
*give-link each other morning tomorrow future we two*  
*We two will exchange it tomorrow morning.*

## 5.2. Historical Development of the Verb Phrase

The historical development of the verb phrase in Australia is therefore partly linked with the development of morphology - interlocked with it perhaps, rather than causally connected, for the syntax apparently played its part.

It may be thought of as development from simple verbal systems, without person marking (for noun subject) or only number marking (as in Aranda), with subsequent development of person marking from sentences with pronoun subject and/or object. The best starting point here is the paper by S.A. Wurm (1969), combined with that of Capell (1972). The processes of development of systems as a whole will then need to be correlated with the actual morphemes involved in them, whereby the relationships within groups of languages may be discerned. Modal and other distinctions are involved in this process. Here again involvement with NP must be taken into account in determining subgroupings of languages.

Map 5 shows how these various types are located in the continent. The indications given on the map are to be read as follows:

- |  |          |
|--|----------|
| 1. Verb invariable for person and number             | unmarked |
| 2. Verb variable for person and number:              |          |
| 1. Suffixes for number only.                         | NN       |
| ii. Variation for person and number.                 | PN       |
| iii. Markers transferable to head word<br>of clause. | PM       |
| iv. Personal suffixes added to catalysts.            | PC       |
| v. Incorporation of object pronouns.                 | IN       |
| vi. Tense indicated in the pronouns.                 | TP       |

2. vi. is really a subgroup of (1), in which the verb itself does not mark person, but pronouns vary for future *v.* non-future according to the tenses of the verb. In Gurnu this affects only the subject marker; in Bidabida and Lardil, however, it affects also the object pronoun (not an object noun), and in Bidabida some other cases of the pronoun share the variability also.

Although there is both simple and compound conjugation, the types listed above are not confined to simple or compound conjugation: each may occur in each kind, but it is most usual for invariable verb forms to be found where there is no compounding. The simple verb type may be best illustrated from a language such as Gadhang, on the central coast of New South Wales. Reference may be made to Holmer's account (Holmer 1966:73-86).

Coming now to details of specification, the following features of a verbal system call for mention:

voice  
mood and aspect  
tense

These will occupy the next subsection of this paper. All these features depend chiefly on the agglutinative character of the Australian languages, with morphophonemic principles frequently complicating the actual processes. The degrees of intricacy in the various languages differ greatly, and in some cases independent morphemes do duty instead of inflection.

#### 5.2.1. Voice in Verbs

It is not entirely easy to define how the term 'voice' should be used in Australian languages. It is usual, for instance, to speak of an 'active voice', yet as in most instances there is no contrast with a passive voice, the term loses part of its force. It is only in certain of the non-ergative languages that a formal 'passive' voice is found, so that it is perhaps better to speak of a 'neutral' voice in the case of ergative languages. Moreover, there is sometimes, though not often, a formal contrast between 'active' and 'stative' verbs. On the whole, it seems better to speak of a neutral voice where there is no formal contrast with active and passive expressions. A normal power of the Australian verb is to express reciprocity and reflexivity by means of formal modifications in the verb, and where these can cover more than one 'mood' it is perhaps desirable to refer to these as voices, otherwise they are 'moods'. In general, voice is concerned

with the relationship between actor and goal. When an actor receives the action upon himself, the fact is said to be expressed by the passive voice; when he performs the action upon or for himself, the verb is said to be in the reflexive or middle voice. When the action is performed by more than one upon each other for each other, it is said to be in the reciprocal voice.

This 'neutral' voice will be taken here as basic and not discussed as such: moods and tenses and aspects will be considered as expressions of the 'neutral' voice unless otherwise stated.

A formal passive voice has been found in Lardil, of Mornington Island, which is not an ergative language. Here the marker is a first position suffix to the verbal stem, -ji- followed by the marker of future or non-future as required: e.g. *be-duR*, *bites* > *be-ji-duR*, *will be bitten*; *be-da-gun*, *bit* > *be-ji-gun*, *was bitten*. The formal arrangements are simple, the uses have given rise to much discussion (Hale 1970, Klokeid 1976).

The other area in which a formal passive is found is on the north-western coastal area of Western Australia (see O'Grady, Voegelin and Voegelin 1966, von Brandenstein 1967). The former mention it as present in Gariera-Ngarluma and Gurama-Jindjibandji: the latter gives a contrastive list of languages in which passives are found as against ergative languages. One of Von Brandenstein's examples from Njamal is

*ŋadja wia -n -na njuna-ŋu*  
*I see-it-past you-object*  
*I have seen you.*

another:

*ŋaḍa-lu wia -n-na -na njuna-na*  
*me -by see-it-past-me you*  
*I have seen you.*

Von Brandenstein, however, has a different interpretation of the phenomenon, for he writes: 'If I call the two opposed terms relating to "transitive action" of verbs PVC and AVC, which stand for "Passive Verbal Concept" and "Active Verbal Concept", to name the older one first, it should be emphasised that the two well worn classical terms "passive" and "active" have been retained mainly so that they may not lose their polarity potential in any comparative study'. Others, however, have not agreed entirely with the author in this attitude, but see in the contrast something that is as real for the west and for Mornington Island. The method expressing the agent of the passive

is different in the two instances also, and it can well be accepted that the distinction does exist.

In languages in which there is no ergative, there is also no passive formation, but what may be called a passive substitute, a construction which enables the passive idea to be expressed. In the NK languages, for instance, *the house was built by John* would be expressed by *the house built itself at John*: here the action is expressed as affecting *the house*, and *John* is referred to not as the actor but as the 'location', so to speak, where the action took place. Parallel to this, and no doubt historically related, is the use, in some ergative languages, of an ergative suffix identical with the locative, though it is more commonly identical with the instrument, as might be more naturally expected. It does not seem possible from purely synchronic evidence, to trace the historical processes involved, but there are undoubtedly some such processes at the back of these usages.

Reflexive and reciprocal will here be treated as voices because it is possible to include moods as well as tenses within their ambit.

### 5.2.2. Reflexive and Reciprocal

It is normal in Australian languages for the reflexive to be marked by a first rank suffix, though there are occasionally other ways of doing it. Tense and person markers will be then second and third rank suffixes after the reflexive marker. Thus in Jindjibandji (north-western Australia), marker *-djangu-* is a separate particle in

*ŋaji manguna djangu      waluŋga ŋa:ndu*  
*I      grabbed to-myself      my thigh*  
*I grabbed my thigh.*

This is the less common usage. The commoner usage is exemplified in several sets of markers used in New South Wales and Victoria. In the Wiradjuri-Gamilaray areas of New South Wales (languages between the Dividing Range and the Darling River) the common marker is *-aŋa-* for reflexive and *-(ŋi)djiliŋa-* for reciprocal, in the Victorian Djadjawuru *-aŋa-* and *djeraŋu-*. The use of *-aŋa-* is found almost as far north in Queensland as Bidabida, which replaces it by *-mali-*. A problem arises whether the marker should be written as *-l-aŋa-*, *-l-ana-*, for it is usually preceded by an *-l-*. This *-l-* however seems better taken as the nominaliser *-l* of which something was said above, for it plays a wider part in the languages and is at least CA if not EA. If that is so and the suffix is really *\*-laŋa-*, *\*-lana-* then probably Aranda *-la-* is to be reckoned with it.

The WD languages stand apart from the eastern groups, having a form of -njanu(n) as reflexive marker. There is also the use of a particle, as illustrated above for Jindjibandji, and this is present also in the far north-east, e.g. Gandju (Kantju) -dja which is verb final, or perhaps to be regarded as a particle immediately following the verb: galga ɲadangu ɲaju ma'obl-dja, *spear my I make-for-myself*. In the Dampier Land languages both infix in the verb pattern and suffix to the verb are employed simultaneously, e.g. Njulnjul -ma-...indj, with which -mi...indj as a reciprocal marker is parallel. It has already been shown that these languages stand apart in pattern from those outside their region, as they do in lexicon.

There is close overlap between reflexive and reciprocal, and in some languages the two are marked in the same way: Bidabida -mali- is both reciprocal and reflexive. In other languages the same marker may be reciprocal in one and reflexive in a neighbouring language. This is so, for instance in Dhurga in southern coastal New South Wales.

Outside the normal EA-CA groups, other methods appear. In the NK languages, for instance, there is a reflexive conjugation with endings different from those of the neutral voice - here perhaps the term 'active' voice is in place. For Ngarinjin the forms are set out in full in Coate and Oates (1970:48, and appendices). In Mawng there is a similar system: the verb is marked by a special set of pronoun prefixes, although the tenses are marked in the same way as for the neutral or active verb: ɲejan, *I see him* (with open /ɛ/), ɲajan, *I see myself* (Capell and Hinch 1970:80-2). Further east in Arnhem Land, in Ranjbarngu, where reflexive and reciprocal combine, McKay states that they both 'may be derived from Rembarnga differential verb (and from some mono-differential verbs) by means of the reflexive-reciprocal suffix -tt, with variants for conjugation class'. In the Roper River area, Mara presents -lana as a final suffix: from ɾaŋ+ɾaŋg-anjɪ, *he hit me*, there is ɾaŋ+ɾaŋg-anji-lana, *he hit himself* (Heath 1978:362), and the eastern EA(?) pattern is restored but in an unexpected syntactic position. In NE Arnhem Land, Gubabwiyingu has -miri as a suffix, which is sufficiently close to -mali for possible relationship. In Diyari however, -mali is reciprocal, showing the continual interchange of the two concepts.

It may be said briefly that although the concepts of reflexive and reciprocal are both found in Australian languages as a whole, there seems to be no really common root that can be assigned to any stratum, though some are fairly widely spread.

### 5.2.3. Tense

Australian languages indicate as a rule time present, past and future: variations on the theme are presented by languages in which the distinction is one of present against non-present, and this sometimes takes the form of a tense which indicates non-future as against another that indicates the future. This is the case in Lardil, where there are two tense distinctions, the first of which marks future and the other present + past. From such a basis as this, other languages develop more detail: some languages divide time into smaller segments, such as morning, noon and night (Tiwi), while others subdivide the day even more subtly - Wiradjuri and the inland languages of eastern New South Wales mark morning, and a number of other subdivisions of the day, for each of the three standard tenses. It is possible to outline on a map the locations of these various time schemes (see Map 5).

In still other languages, there is a distinction of aspect intertwined with tense: a Realis and an Irrealis aspect may both have a series of tenses, usually not as elaborate in the Irrealis as in the Realis. This is the case in north Australia - the Kimberleys and Arnhem Land, for instance. In some cases there is not a strict division into tenses, but aspect seems to have the controlling influence. The Yulngu languages (otherwise called Murngin) in north-east Arnhem Land exemplify these.

It is therefore not possible to set out the tense schemes of modern Australia in any short and clear form. Moreover, the morphemes differ so much that it would seem that there is no common pattern - at least in early Australian (EA). In CA there is a more clearly cut formation. It is interesting to observe that even in prefixing languages as a whole most tense indicators - like those of voice, mood and aspect - are suffixes. It would seem that throughout the languages, the actor was first thought of, then the action and last of all the time. There are indeed exceptions to this generalisation, for VOS is a not uncommon sentence type in Australia.

A distinction of imperfective-perfective is found in some parts of the continent as well. It is not, however, as normal in Australia as in other parts of the world, though implied, of course, in the expression of a formal difference only between past and non-past (as in Lardil and elsewhere).

In the formation of tenses, as in most other features of conjugation, the WD languages stand as a group. Two sets of examples drawn from Capell ([1956]/1962:73) are typical: Djaru and Mudbura:



1. Djaru: *ju- give* and *ma- take, say*

Present	Near Past	Far Past	Near Future	Far Future	Imperative
ju-ŋan	ji-ŋja	ju-ŋani	ju-ŋgu	ju-na-ŋgu	ju-ŋga
ma-nan	ma-ni	ma-nani	ma-ŋgu	ma-na-ŋgu	ma-nda

2. Mudbura: *ju- give, ŋa- eat*

Present	Near Past	Far Past	Near Future	Far Future	Imperative
ju-ŋan	ju-ŋana	ju-ŋana-ni	ju-ŋgu		ju-ŋa-nda
ŋa-nan	ŋa-nani	ŋa-nana-ni	ŋa-ŋgu	ŋa-lu	ŋa-ŋga

In the WD languages the verb either takes the suffixed pronoun as suffixes or it is transferred to a forward position through an AT process, leaving the verb itself indicating tense but not person. In the catalyst subgroup the person marker will naturally be carried by the catalyst, not by the verb. Mudbura and Djaru are both catalyst languages.

These languages frequently have up to four verb classes (as in, for example, Bidjandjadjara) and often also sets of participial endings which are characteristic of the group.

Another characteristic group is that of Wiradjuri languages of New South Wales in which there is a proliferation of tenses, chiefly in the indicative positive mood. In Wiradjuri itself the following are found, and are illustrated with the EA verb root *bu, hit*: in Wiradjuri this is conjugated by means of the auxiliary verb *ma, take* (as though to say *I take him a blow*).

General Present:	bu m-ara, <i>hit him.</i>
Specific Present:	bu m-ala:wana, <i>I am even now hitting him.</i>
Aorist:	bu me: <i>I did hit him (some time).</i>
General Perfect:	bu-m-algwa:n, <i>I have hit him.</i>
Hodiernal Perfect:	bu m-alŋa:rin, <i>I have hit him today.</i>
Yesterday Perfect:	bu m-algura:ni, <i>I hit him yesterday.</i>
Far Perfect:	bu m-algunan: <i>I hit him long ago.</i>
Pluperfect:	bu m-alejni, <i>I had hit him.</i>
General Future:	bu m-algiri, <i>I shall hit him.</i>
Near Future:	bu m-al-awa-giri, <i>I shall soon hit him.</i>
Hodiernal General Future:	bu m-al-ŋari-giri, <i>I shall hit him sometime today.</i>

Hodiernal Definite Future: bu m-al-ŋari-awa-giri, *I shall certainly hit him today.*

Exact Future: bu m-e:giri, *I shall certainly be hitting him.*

The names used here are Müller's. There is no space to discuss them in detail. In addition, the language has also an optative, an imperative and an infinitive. Other languages using a similar system are Gamilaray, and other northern languages.

Some of the modern languages have a number of verb classes or conjugations, and this arrangement is not limited to any one part of the continent. These arise partly from phonological accommodations and so for purely phonetic reasons, but this does not account for all the variations. Verbs may take certain tense markers and it is just as impossible to say why they should do so, as it is in IE languages such as Germanic, Greek, Latin or other. This kind of division among verbs is therefore fairly ancient and its origin probably now out of reach to the historical linguist. In the isolated Tiwi language this phenomenon is not found and moreover, in this language tense markers are largely prefixes, not suffixes as in most other languages.

While their existence needs to be noted, their nature lies beyond the scope of the present study. Their comparative antiquity needs also to be noticed, along with the fact that they appear to be absent from such regions as the New South Wales coastal and anterior coastal languages such as Ngunawal, Dharug, Dhanggadi, and in Queensland Durubul and its neighbours.

#### 5.2.4. Non-Finite Forms of the Verbs

Some of the northern languages of Arnhem Land have points of structure which recall features of the Papuan languages of New Guinea. One of these is the use of sentence-medial forms of the verb as against sentence-final forms. In such a sentence as *I saw him and then called out to him*, the typical Papuan structure of the Central Highlands and parts of Irian Jaya is *Having seen him I called out to him*. Similarly, *When I saw him he called out to me* becomes *he having seen me called out to me*. In the first instance the sentence medial verb *I saw him* does not change for person: in the second instance it does change, for the actor could not be indicated otherwise. The first clause in each case becomes a participle, which the present writer long ago called SM I, where no change of actor is concerned, and SM II where the actor changes between the clauses. The terms have been very generally adopted in Papuan grammatical description.

There are a few languages in Australia where SM I and SM II forms occur: these are mostly WD languages, and this feature helps to set off the WD languages from those of other parts of the continent. While there is no cause to analyse these in detail here, they may be briefly illustrated. Reference can be made to Capell 1962:31-2 for Waljbiri, where the constructions are treated as participial, and to the similar treatment of Bidjandjadjara by Trudinger (1943:215-17). Summary examples in each of the languages are given here.

Bidjandjadjara examples:

angula-ŋa      nja-gugu  
*having-gone-I see-shall*  
*I shall go and see.*

njundu angu-njaŋga, ŋajulu nja-gugu  
*you    having-gone    I    see-shall*  
*When you go, I shall see.*

udulu-ra              njaŋanba              ŋajulu ma gadi-ndja-gu  
*having-gathered these (SM II)    I    can take-them-away*  
*Gather these up and I can take    Gather these up so that I can*  
*them away.                              take them away.*

udulu-manji-ŋa              njaŋanba ma gadi-djigi-dja-ŋgu  
*gather-process-I (SM I)    these    so-that I-may-take-them-away*

ŋaRanji-ŋa      njaŋanba ma gadi-ndjigi-dja  
*I-am-staying these      so-that taking-them-away*  
*I am staying so that I may take these away (SM I).*

Various time sequences are dealt with in different ways in these languages, which can be illustrated here only in outline and therefore not with the degree of clarity really desirable: what is sought here is not the formation of the structure but really its syntactic use. Thus for *I shall go and see*, Bidjandjadjara has:

an-gula-ŋa nja-gugu  
*go-ing- I see-shall*

by contrast with *when you go I shall see* (SM II);

njundu an-gunjaŋga ŋajulu nja-gugu  
*you    go-having    I    see-shall*

Purpose constructions are treated similarly, in a way which is difficult to reproduce word for word in English. Taking again the previous example *I am staying so as to take these things away*, Bidjandjadjara shows

na-Ranji-na njananba ma ga-dindjigidja  
*stay-pres.-I these away take-for the purpose-of*

The same type of SM constructions are used as in the time clauses, but with different suffixes. The pronoun subjects are suffixes to the verb, as these are WD languages of the type previously discussed. Similar examples can be produced in other languages such as Waljbiri.

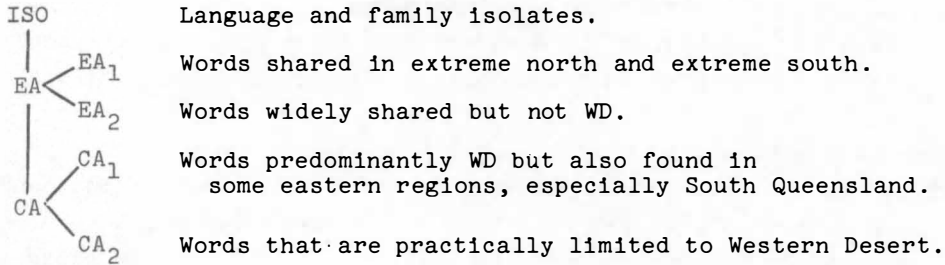
It is noticeable that these non-finite constructions do not include infinitives, which have no exact correspondence in Australia. They differ from the New Guinea types in including purpose clauses rather than only temporal clauses, and there is no reason to doubt that they developed in Australia itself.

## 6. THE AUSTRALIAN LEXICON

### 6.1. Introduction

It has been mentioned at the beginning of this study that quite a number of indications that Australian languages are not independent of each other came to light during the last century. Some such are found in various places in Curr's *Australian Race*. The examination seen in Schmidt's two works (Schmidt 1919a and b) represent further work in this field, and this work is important, in spite of its leaning on the anthropological Culture Circle Theory, because it is the first to give full place to the study of sound laws as enunciated in the theory of Indo-European philology. Kroeber (1923) also added to the work, setting out maps of the occurrences of various words for the same thing in different parts of Australia. The same task now falls to this study.

Australian vocabulary is regarded here as consisting of four main strands, or five if 'Common Australian' is subdivided. Regional vocabularies which are apparently language isolates or family isolates are placed first; then EA groups and finally CA groups. The plan may be set out as follows:



When all is said and done, the number of words either EA or CA is not large. This is probably due to the time depth, which makes possible cognates often hard to recognise. O'Grady has shown this clearly in his essay in the present volume. Great time depths are not actually documented and are difficult even to guess at. What speech was like 30,000 years ago is completely unknown for any part of the world.

It seems desirable to take the isolates - whether individual languages or families - first, not that much can be said about them historically but that something must be said. Mention was made earlier (3.3.2.) regarding Tiwi, and very little more can be said about it here, except that it is obviously such a language isolate. Yet at the same time its phonology and many of its grammatical methods are Australian, however aberrant they may seem. Something also was said about some languages of the Gulf country in Queensland (3.3.1.) and Dampier Land (3.3.3.) where at least some EA elements are present in the construction but very little in the vocabulary. Some enlargement of discussion about these isolates is now possible. They are in some cases rather 'regional' languages than isolates, and connection with EA is obviously present, though hard to define in detail.

It is desirable to say something about the phonetic structure of the Australian word. This has generally been taken to have been bisyllabic, of the type CVCV(C). In some instances it has seemed there might have been a monosyllabic language type in some areas, especially in Arnhem Land, but comparison, where such is possible, suggests that this was not so. Gunwinjgu presents a considerable number of monosyllabic roots, when the noun-class or other prefixes are removed, e.g. *gun-daŋ*, *mouth*; *gun-djen*, *tongue*; *gun-gom*, *neck*; *gun-mim*, *eye*; *gun-geb*, *nose, face*; *man-me*, *food*. One is at first tempted to record such forms as perhaps earlier or original but in point of fact it can be shown that they seem to have developed in isolation from longer forms which are found in other parts of Australia.

In Gunwinjgu stress falls on the initial syllable, and when class markers came to be prefixed, this stress will have drawn the original stress back, leaving a tendency to shorten the complete word by loss of a final syllable. Bisyllables in Gunwinjgu tend not to take the class prefix: duRug, *dog*; dalug, *woman*; dunin, *man*. They do not always do this, however, as in ɲal-duRug, *bitch*, ɲal-dalug, *woman*, and in related languages this is regular, e.g. Djawan ɲalmugo, *woman*. Other nouns which take the possessive prefixes do not take the class marker, as -'ɲejo, *name*: ga-'ɲejo, *your name*, etc.

The suggestion of loss of a final vowel is borne out by Gunwinjgu gun-daŋ, *mouth* as compared with Badjiri ɟaŋa, *mouth*, gun-mim, *eye* with CA\*miRiŋ. More complicated changes also seem to have occurred, if Gunwinjgu gun-RuRg, *country, camp*, is to be taken as a form of EA \*ɲura.

In classifying languages, noun class developed later. This is shown in the paper in this volume on noun classification in Australian languages, and the development was later than the separation of the languages from EA or CA originals: man-me, *food* represents EA \*maj(i), *food*, and gun-mim, *eye* is paralleled by a Cl. V form man-mim, *seed of plant*, also in Gunwinjgu.

Gunwinjgu may help to build up EA or CA vocabulary if examples like -daŋ, parallel to Badjiri ɟaŋa are allowed for. However, it remains possible that the Badjiri word may show an *added* vowel and in fact the CA root is generally \*da.

Other types of difficulty arise also: e.g. Wagaya jindaɭ, *tongue*, which seems to answer to Northern Kimberley mindjal, *mouth*, and both to EA \*dalaŋ, *tongue* (and \*da, *mouth*). This last example also raises the question of a possible relation between \*da and \*dalaŋ. It is here also that Gunwinjgu gun-djen belongs - but to which root?

Some points raised in the opening section of this essay need to be recalled at this juncture. One of the many difficulties connected with tracing vocabulary in Australia is that not only are the small number of shared words chiefly basic vocabulary, such as would appear on any lexicostatistical list, but these words tend to be found in widely scattered areas throughout the continent, including languages which actually show a very small common content. If the lexicostatistical argument is accepted - that basic vocabulary tends to remain in use the longest - why should such words as *mouth, tooth*, etc. appear thus among those that on any ordinary theory of linguistic development would appear to be native in the given language? It is not to be presumed that speakers of language A or B had not words for such concepts until the EA or CA vocabulary came to them. Why, then,

should such words be found among the common borrowings? It is possible to point to word replacement by taboo, but this argument should not be invoked indiscriminately. The author is not prepared to answer the question, but it must be raised and an answer sought. Either for some special reasons, lexicostatistical processes are not valid in Australia, or some better reason must be found.

One or two thoughts may be put forward. It is not just the total number of words of several languages compared that counts. Of the basic vocabulary, words used in the normal business of daily life are presumed to be surest for retention. If there is any high degree of disagreement in these between two languages, it seems hardly likely that the less used vocabulary, where there is generally most difference, will agree to any large extent.

Certain historical circumstances may alter the picture. Invasion or conquest may affect the vocabulary of daily life. English provides a historically attested case of such a happening. The cow or the ox become beef on the nobleman's table, and the sheep becomes mutton, as Sir Walter Scott pointed out long ago in *Ivanhoe*. Changing legal and social orders were reflected in English language as in history, and the imported religion showed its external origin in the vocabulary.

Here a difficulty arises from the angle of general historical linguistics. In this sphere the term 'internal reconstruction' has long been in use, but does not mean just what is intended here. Internal reconstruction aims at explaining changes in terms of regular sound changes and other processes traceable within a number of languages, not by the movement of words from region to region on a geographical basis under social or religious impulses. Thus Anttila (1972:264) says: 'internal reconstruction...is exactly the same as morphophonemic analysis'. This is something that cannot be demonstrated under Australian conditions. The words in question are not traceable along a regular trail from a (probable) point of origin to a destination; they are sporadic and word A is not usually found in the same set of languages right across the continent as words B, C or D. The time depth in Australia, once again, is so much greater than that involved in Proto-Indo-European reconstructions, and there is absolutely no historical documentation such as is usually available in PIE. Hence the situation is not entirely unexpected. At the same time, the inferences must always fall short of actual demonstration, but they are sufficiently likely to be probable, and conclusively form a strong argument.

There are areas in which certain common words are not found at all. One such was listed by Schmidt (1919a:222), of words which miss out the eastern languages, and the southern (Narrinjeri) group: *mouth*, \*da; *tooth*, \*liraŋ; *breast*, \*ŋamaŋ; *blood*, \*guđuđu (form doubtful but approximate); *egg*, \*gambu. On the other hand, quite a number of words not recognised yet as EA or CA are found scattered over Australia, such as *gagara*, *gagari*, *moon*, which occurs in the NK, Narrinjeri, Upper Murray, north-central group languages, and near Cape York, Schmidt (1919a:224) draws attention to this word but has no explanation for it - and there are many such. It is words of this sort that led Elkin to postulate his channels of movement or 'corridors', which are discussed in the following subsection of this essay (6.2.).

In the case of words such as \*gagara, which seem to occur in certain 'corridors', it is possible to suggest (a) that they are the remains of ancient Australian words that have been mostly replaced, or (b) that they have spread along such 'corridors' from a central region. In either case, they are not CA words but EA, if it is true that CA speakers were the group that spread over eastern and southern Australia about 6000-5000 B.P.

This group seems to have spread from about the modern Wave Hill and Victoria River and perhaps Ord River area, where archaeological sites such as Stonewall Creek and Miriwun (Mulvaney 1975:133, 135, 194) are found, dating from about 18,000 B.P. Quite a number of such sites in Arnhem Land go back to similar periods, and these would seem to be connected with EA speakers.

The CA groups, on the other hand, are more unified: the languages are more closely related to each other, and could well be results of the movements of one set of people, mixing with earlier peoples in different parts of the continent. Its movement can well be correlated with the outward spread of a new hafting technique (Mulvaney 1975: 125ff.) that spread out towards Queensland and is found at the Keniff Cave in the centre of Queensland, about 6,000 B.P., overlaying an older c. 18,000 culture (Mulvaney 1975:288-9). The linguistic evidence suggests that at one period this movement, which is apparently CA, moved south-east through central Australia and western Victoria, into coastal New South Wales and thence north again. Its vocabulary and, still more, its grammatical type are quite different from those of the EA groups which do not agree among themselves. There may well be one CA (differentiated by outward migrations at different periods), but not one EA foundation group. The whole argument being set out here suggests small early migrations into Australia from 'Sundaland' of



bands of Australoids physically similar but not necessarily akin to each other.

As far as the migration routes are concerned, there has been a tendency to recognise a general north to south movement, to which Aboriginal traditions point. Curr says of these '...the late Edward Stone Parker, ...formerly Assistant Protector of Aborigines in Victoria, in a lecture delivered in Melbourne in 1854, speaking of the tribes of Victoria..., remarked that they all claim a northern origin. The late Rev George Taplin also mentions in one of the several accounts he published of the Narrinjeri tribe...that they have a tradition that they originally came down the Darling, which river and the lower Murray they descended to the sea'. He mentions as verbal evidence words for 'dog, opossum, Blackfellow, water, laughing jackass (*kookaburra*) and heat' (Curr I:198). This, of course, is the reverse of Thorne's theory, according to which they would, indeed, have migrated along the coast from north to south, but finally entered the interior of the continent through the Murray mouth and so proceeded northwards up the Darling. Curr quotes Ridley in the *Kámilarbí, and Other Australian Languages* as saying on p. 118: 'On the other hand, the Aborigines in various parts of the continent point to the *north-west* as the quarter from which their tribes came'. Dixon, however, (private communication) states that 'the Djirbal have stories about the first man, Girugar, who was the first man to travel over the country', and who gave names to all the places - having come from the south. This may be quite true for the Djirbal tribe - and probably is - without being necessarily true for others, and still less, all.

## 6.2. Corridors - the Paths of Peoples and Languages through Australia

During the periods in which they came to occupy Australia, the peoples moved about freely, later settling each in a certain area which later became the tribal country, sanctified by myths which grew up. Professor Elkin has suggested that some of these movements can be at least partially recognised. He speaks of 'corridors of communication' (Elkin 1970:707ff.). This seems to be the place in which to investigate these suggestions and make them more detailed and precise (if possible), especially as the present writer has discussed with him these suggestions and had the benefits of notes drawn up by him in preparation for the paper.

Before this, however, another suggestion put forward by Dr Ian Thorpe is also worth mentioning because it deals with how the people may have

spread round before spreading inwards across the continent. According to his ideas, they would have avoided plunging directly into a cross walk through to the interior of the continent. As they had come by sea, it might be easier to travel round the coast first, settling where they would rather than toiling across an interior completely strange to them, not very friendly in its terrain, producing foods to which they were not yet accustomed. So he thought of them as passing from North Australia (or the north-west - the actual place of the first landing can never be identified, of course) around the coast as far as Cape York, then following a southerly direction down the eastern coast in the direction opposite to that taken in 1770 by Captain Cook - until they reached the southern limit, then following westwards along the southern coast, as far as the one great water opening into the interior - now called the Murray River. Some of them might still have continued westwards, but others might have turned and followed upstream along the Murray, leading to the populating of the western interior of New South Wales. The discoveries at Lake Mungo, in the Menindee district, which date to about 28-30,000 B.P., do not in this way imply an earlier crossing through the interior from the present north-west or Arnhem Land, though of course they are not inconsistent with such a process. This idea of a settlement of the fringes before the interior is quite possible, and the distribution of EA<sub>2</sub> pronoun systems along the coast of west Australia as far south as modern Perth and Cape Leeuwin seems to support it.

Later would have come the interior spread suggested by Professor Elkin and there is much linguistic evidence to support this. Whilst the various tribes became settled each in its own region of the continent, and developed myths of origin, etc., concerning such areas, they often met their neighbours for ceremonial and trading purposes. The trade relationships and paths of interchange were studied much earlier by McCarthy (1939); the ritual paths have not been worked out in such detail. However, in the article mentioned, Elkin has shown that certain words tend to follow broad paths of transmission - not only ritual and kinship terms, which do not imply the migration of a tribe with its language, but words of common and daily speech that do just this.

In more than one place Elkin mentions the spread of ritual practices within his own experience, and the writer has seen similar movements taking place. That they took place also in earlier periods seems perfectly logical: in many cases words have spread at the same time.

Elkin suggests three corridors of communication - a western, a central and an eastern route. He adduces words that seem to occur around arcs of circles from north to south-west and north to east, as well as one that can be traced directly southwards from the north. Such a word as \**ṅandi*, *mother*, for instance, can be found in the middle reaches of the Murray River as well as in Arnhem Land, and in parts of South Australia between the two. So an attempt is made here to enlarge on this pattern of thought in an endeavour to trace the internal history of Australian languages. It is not the normal method of comparative philology at all - this is admitted, but in this continent with its vast time depths normal methods just break down and must be replaced by others if any results are to be obtained.

Even so, more than one stratum must be allowed for, even apart from EA and CA. There is clear evidence that these EA and CA strata have met in the formation of the dual pronouns in the WD languages. In the western branch of these, \**gudara*, *two* has been the formant and in the eastern section it has been replaced by \**buladj*. Yet both subdivisions of WD are still WD languages.

1. A start will be made with the Central corridor, which seems in some ways to be the most prolific of the three. This is the corridor which represents the north-south movement, and the southern cognates tend to be found chiefly in Victoria and New South Wales, and to have their northern relationships in Arnhem Land and in the Northern Kimberley. The point of immediate interest is that the Kimberley and Arnhem Land sections do not correspond well to each other: roots shared between NK and Victoria and usually not also Arnhem Land, while those of Arnhem Land (Gunwinjgu is the chief area of comparison) found in Victoria are not usually NK also. Why this is so is impossible now to state.

This statement can be easily illustrated: Schmidt called certain languages of west and central Victoria '*kulin*', after the word *gulin*, *man*, or Kuri for a corresponding group in coastal New South Wales. The word corresponds to Ngarinjin of NK *gulin*, *lay an egg, hatch, produce*, which answers to it phonologically and apparently also etymologically. It is also found in the Perth area as *adjin*, with the same meaning as verb. Yet this root seems to have no place in the Arnhem Land languages.

Another example may be taken from Elkin's *ga:giri*, *moon*. This is fairly widely spread in the Kimberley languages, and the root, allowing for weakening of final vowels, may be taken as \**ga:gara* or at least \**gagara*. Various forms of it are found in south-west Queensland

in Wagabara and Bundjil (using Schmidt's term for one of the languages inland from Cooktown), and Gaurna (Adelaide) and Murundi (gagiri). It may also be Wadjiginj and Badjamal (Daly River) gare, Amarag and Jiwadja (western Arnhem Land) guRan, and Dangbon guruna, Mawng gurana, and even Margu rana may be related. In NK there is Gambera guRa, Wuljamidi gagiri. This word does not penetrate as far south-east as Victoria. Such a word may be (a) the remains of ancient Australian words that have been mostly replaced, or (b) spread along the corridor from a central region, marked here probably by \*guRana. In either case, they are not CA words but EA of some type or stratum.

Alongside but in contrast with this root there are others occurring in other parts of Australia. Two of these can be used by way of illustration:

- (1) \*giban, central New South Wales: Wiradjuri-Gamilaray, parallel but apparently not the same as Yuwinj \*gubandun, though it could be derived from it. The Gamilaray here has another root \*balu(η) also.
- (2) \*bira, 'Luridja' including Bindubi, South Australian Lakes language: Mirning, wila-ra. This exemplifies the set of suffixes listed by O'Grady (1966:97-8) whose status is undecided.
- (3) and (4) two different words found at each side of the continent, Yungar miga on the west and western Victoria manji(η) on the east.

There is a larger set of comparatives possible between Gunwinjgu and western Victoria, though at this stage some of them are doubtful because of the distance between them and unavailability of vocabularies of languages in between. They are used here simply for the sake of suggestive comparisons between them, some of which may be proved, others rejected. They include:

1. \*gabun, *nose*: Gunwinjgu gun-geb, cf. Yaralde gobi, Yodayoda gowo, Djabwuru gabun, eastern Victoria, Garnay Na, Ngarigu gun. Here there is also in north-eastern Queensland Djirbal guwu, Gundjen owe, Gugubera gau, and others.
11. \*bereb, a bird name of varying significance, occurring in Gunwinjgu as berebbereb, *plover*, and one closely related, \*bered in the same language as beredbered, *kingfisher*, Bungandidj as birubir, *redbill*, Wembawemba

- as *beredbered*, *plover* and in Yulngu languages as *birgbirg*, *plover*. These all seem to be related.
- iii. *werg*, *quick*, in Gunwinjgu *weRgweRg*, *quick*  
Wembawemba *werga*, *to hurry*, possibly in WD Bindubi  
*war-bu*, *hurry* (where *-bu* is the verbalising  
auxiliary *bu*, *hit*, *cause*).
  - iv. *\*wida*, *whistle*, Gunwinjgu *wid-me* (with intransitive  
auxiliary: see *\*baluŋ* below): Wembawemba, Madimadi  
*wiða*, cf. Yulngu *wari'jun*.
  - v. *\*jaRga*, *search for*: Gunwinjgu *jawa-*, Djadjjala *jaRga*,  
Madimadi *jaga*.
  - vi. *\*dara*, *stand*, Gunwinjgu *-di* (past tense *da-nj*),  
Yulngu *dara*, Djadjadjala and Wembawemba *djari-ga*.
  - vii. *\*baluŋ*, *turn*, in Victoria often *wil-ŋa*, Gunwinjgu  
*baluŋ-me* with auxiliary as in (iv) above, Yulngu  
*bil-*, *turn*.
  - viii. *nali* (or *nari*), *what?*: Narinari *nari*, *what?*, *who?*  
Bungandidj *nau*, *what?*, *ŋanu*, *who?*

It is noticeable how many words of this group contain apparent cognates within the Murngin or Yulngu languages: this requires further research, especially in view of the fact that these languages of north-eastern Arnhem Land are clearly from the angle of structure closely related to the WD languages and therefore should contain a CA ingredient. There is also a set of compounded verbs, seen in (iv) and (vii). In Gunwinjgu *me* answers to EA *-ma*, *take*, *have*, perhaps the most widely distributed auxiliary in Australia: it has already been mentioned a number of times.

It would thus appear that this corridor is not a simple group in itself, but consists of two parts which have coalesced somewhat on the way south. One group of words is Kimberley-Central Australia-Victoria; the other is Arnhem Land - Victoria. Cognates between extremes still have to be sought, but that there is such a corridor seems clear. In Elkin's paper there are several traits included with the linguistic also. In regard to the words of this corridor, he notes that 'of 18 Kimberley words 12 are also in the south-east, that is, east and south of a line joining Port Augusta in South Australia, and Maryborough in Queensland, and two of these are also in west-central Queensland; two others are in Central Australia and seven in the south-west of

Western Australia. Likewise, eight Arnhem Land words are in the same 'south-east' region, and one of them in west-central Queensland. Further, nine of the fifty words appear in both the south-west corner of the continent and in the 'south-east', two of these being also in the Kimberley Division' (Elkin 1970:707).

2. The western corridor - mapped rather differently from Elkin's - has been studied in some detail by O'Grady (1966) and called by him the Ngayarda family. His word-list of proto-Ngayarda stems, from page 99 to page 103, consists of 'reconstructions without known cognates in non-Ngayarda Australian languages'. This list of 137 words, then, does not occur elsewhere, at least so far as present investigation has gone. They are peculiar to the north-western area of Western Australia. It may be that in the future some cognates may be found for some of these, but at present they stand as a group, stretching from a point a little east of Port Hedland, round North-West Cape and inland, taking in Baljgu in the east and Dalandji in the west - quite a respectable area. Moreover, similar groups extend along the west coast towards Perth. These have all been heavily influenced by EA overlays and in the east by CA also, and in some of them constructions proper to these later strata are found. The vocabulary is not only peculiar to this area, but in so being has nothing to do with similar isolated groups to the east. This area, then, forms another major subdivision of Australia. It gives evidence of spread from east to south-west. O'Grady's remaining subgroups show words of other strata, which makes clear the degree of mixture to be regarded in the subsequent work. It will not be further discussed in this study.

3. The eastern corridor remains for discussion. This is probably not to be regarded as a unity. Elkin illustrates it with two different words for *boomerang*, to which a third may be added, *gali*, which is a WD word. The other two are \*bar(a)gan and \*waŋal, and both have quite a number of phonetic variations. The word \*waŋal is found in north Queensland and central Queensland, through New South Wales in the direction of Bourke and Swan Hill on the River Murray, also on the Goulburn River and in eastern Victoria - Garnay. Elkin notes that it is paralleled by a very similar distribution of \*gwijaŋ, *fish*, and in the field of ritual life, by the practice of mummification and a belief in sky heroes. These words and some at least of the usages, go as far west as Flinders Range in South Australia. The other word for *boomerang*, \*bar(a)gan, is chiefly south-east Queensland and the New South Wales coast north of Newcastle, but also inland with change

of meaning: in Wiradjuri, for instance, the root is applied to the sickle moon and to a tendril; in Biribay of Port Macquarie it is applied to hair cord and in Dharug to the stringy bark. The point of interest in this case is that the same root is found in the Northern Territory, in languages round about Katherine: Mangaray, Djawan and Yangman, as *balgan*.

Apart from these words for *boomerang*, there is great variety and no agreement at all. This is usually the case in Australia: similar words are usually nested amongst great variety, which suggests that the original peoples, while racially similar, spoke a great variety of unrelated languages. This may be expected in terms of anything except monogenetic theory of language origin. It must be remembered here again - even if it seems the reminder is *ad nauseam* - that research into Australian languages carries the student back beyond the period of record of human language altogether. While there is no evidence anywhere that language had a monogenetic origin, Australia seems to show positive reasons for suspecting that it did not.

The present study is only suggestive, not exhaustive. It is not possible in the available space, nor within the present degree of analysis to answer fully the question concerning the development of Australian languages. A brief list of words will be offered here, which it is hoped will bear out the ideas put forth in the present essay. They are arranged alphabetically in each group - western, central eastern, EA and CA. They are meant merely to illustrate. Much more work is needed yet to produce a fully analysed Australian dictionary.

### 6.3. Regional Vocabularies

Two types of subdivision within this section may be made: the present concern is with vocabulary, as against structure which has been considered in the earlier part of the study. Many of the structural differences have developed in the continent itself, but vocabulary differences of the present kinds can be regarded as already existent when the speakers of the languages arrived in Australia.

It must not be presumed that the divisions here discussed represent all the apparently non-EA/CA groups. Some may be language or family isolates, as has already been mentioned, and Tiwi is one of the former types - language-isolates. The Queensland Gulf group (3.3.4.1.) is an example of the family isolates. Moreover, there has frequently been cross influence from EA/CA on originally non-local groups. Again, EA has already been defined as itself a conglomerate, not a single

ancestor. The diagram in O'Grady's article in this volume represents this state of affairs. Most of his languages on the lines dated earlier than 10,000 B.P. are types of EA, and perhaps some of those between that date and 5,000 B.P. also are. The problem, which cannot be faced in this present work is to determine what is EA<sub>1</sub>, EA<sub>2</sub>, etc., as far as subgrouping may be required. Only certain of the regional vocabularies will be discussed at present. The full working out would result in an Australian comparative dictionary, for which the time is not yet ripe.

The list used here is a short list in which the words of the various subgroups are tested against a certain number of EA/CA roots whose existence has been shown by the author in other writings. They will serve to show how far the various tested languages (representative of their subgroups) deviate from EA/CA standards. No attempt is here made to distinguish between EA and CA - this remains for a later study to do with any degree of certainty. They simply serve to show what recognised Australian standing the various words tested may have.

#### 6.3.1. Tiwi

Osborne's finding as to the 'Australian' nature of Tiwi (Osborne 1974) has been already mentioned in 3.3.2. The vocabulary appended here shows that while in general he is right, there is a slightly higher occurrence than this would indicate. At the same time, it cannot, of course, be proved that other EA/CA words are not loans from mainland languages. For instance, his *kukuni*, *water*, could well be a loan from Jiwadja: -ni is the masculine ending. Hence no historical conclusion is presented at this stage.

English	EA/CA	Tiwi	Comment
<i>beard</i>	ŋanga(r)	kumuti	taken by Osborne as Malay <i>kumis</i>
<i>big</i>	bułga, bunda	aRikuia-ni	-ni is a masculine ending
<i>black</i>	maļu	tunuwini-ni	
<i>bone</i>	ɖargu	pwata	
<i>breast (female)</i>	ŋamaŋ, bibi	puia-ti	-ti/-ti is a masculine ending
<i>burn (intr.)</i>	gamba	ɖurumumi	
	ŋuraŋ	ɖapaɖa, taŋaRima	



English	EA/CA	Tiwi	Comment
<i>crow</i> (n.)	wagaŋ	wakwaki-nl	Australian root
<i>ear</i>	biŋaŋ, kuru	mikaŋtan-ŋa	-ŋa is a feminine ending
<i>earth</i>	ŋuruŋ	kaluwaŋi	
<i>eat</i>	ŋa-, da-	-apa-	
<i>egg</i>	gambu	'karaka	turtle egg
<i>emu</i>	ŋunin		not found
<i>excrement</i>	gunŋ	kiŋi-RI	possible Australian
<i>eye</i>	miriŋ	piŋaRa	
<i>father</i>	baNbaN	-riŋa-ni	
<i>fire</i>	waru, ŋuraŋ	jikwa-ni	
<i>fish</i>	gwiŋuŋ	minu-ti	
<i>food</i> (veg.)	maji	jiŋki-ti	
<i>give</i>	ju-, wu-	akəRai	
<i>go, walk</i>	ja(n)-	-uRi	
<i>hand</i>	maRaŋ	jikaRa	
<i>head</i>	gada, walu	puŋitaka	
<i>hear</i>	wina-, wuna-	-muŋuma	
<i>hit</i>	bu-	piŋi-	possible cognate
<i>man</i>	baduŋ	awuri-ni	possible cognate
<i>meat</i>	minja	puŋiŋkapa	
<i>moon</i>	gagara	ŋapara	
<i>mouth</i>	dagaŋ	j r puntaRa	
<i>nose</i>	mura(ŋ)	j R ŋ'tamura	
<i>one</i>	? gudju	jati	
<i>see</i>	na-	-mani	
<i>shin</i>	daraŋ	jiŋuwana	
<i>sit, seated</i>	ni(n)-	-mu	
<i>skin</i>	gulaŋ	mipura	
<i>small</i>	duŋu	kiRiŋi-ni	

English	EA/CA	Tiwi	Comment
<i>smoke</i> (n.)	buriŋ	kumiriŋi-ni	
<i>speak</i>	wanŋa	aŋ raka	
<i>spear</i>	guridada	arawuniŋkiri	
<i>stand(ing)</i>	ŋaRa	-inti	
<i>star</i>	biŋdiri	tapali-ŋa	
<i>stone</i>	buli	wala-ŋa	possible but with drastic vowel change
<i>sun</i>	dindu	jimi-ŋa	
<i>take, grasp</i>	ma-	maru'Ri	
<i>they</i>	dana	wuta	
<i>tongue</i>	dalaŋ	jimitaŋa	
<i>tooth</i>	liraŋ	jiŋkana	
<i>tree</i>	? yiwara	purint riŋa	
<i>two</i>	buladj, gudara	juraRa	
<i>urine</i>	gumbu	pwati-ni	
<i>water</i>	gugu, gabi; ŋaba	kuku-ni	Australian
<i>we two</i>	ŋali	mu-wa	
<i>what?</i>	minanŋ	kami-ni; aunwa-ŋa	
<i>who?</i>	ŋana	kuwa-ni	
<i>you</i> (sing.)	njin	ŋiŋ-ta	probably Australian
<i>you</i> (plur.)	nura	nu-wa	probably Australian

The words marked 'probably Australian' are of interest, especially the pronouns, for it has already been suggested that the word for *water* may be a loanword. The pronouns, however, are less likely to be so, for these are amongst the basic words of a language. The point of especial interest is the ending *-wa*, which is found in *mu-wa*, *we two*, *nu-wa*, *you* (plural), and also in *ŋa-wa*, *we*. If the plural pronouns of 1st and 2nd plural are compounded of Australian roots with the addition of *-wa*, this would seem to be the *-\*badj* already mentioned as characteristic of certain areas of Australia and presumably EA.

It may seem that basically this language is not Australian, especially when its greatly divergent grammar is considered, but it must be remembered that the same impression was made earlier by the northern languages of Cape York Peninsula until K.L. Hale was able to demonstrate that they had merely undergone a particular set of sound changes - then they could be shown to be Australian. The same may be true for Tiwi also. It is as yet too early to make a final judgment.

### 6.3.2. Arnhem Land Languages

In the original classification in terms of lexicostatistics by O'Grady and F.M. and C.M. Voegelin in 1966, the Australian languages were divided into 29 phyletic families, of which 28 were found in Arnhem Land. This implies extreme variation in this part of the continent. Although the present study may lead to some modification of this scheme, there can be little basic disagreement with it. According to Dyen's principles of relationship (Dyen 1956) the original 'homeland' should be sought here. It is not within the scope of the present study to do this but only to point out (a) that there is more interrelationship between the languages of Arnhem Land than was at first thought, and (b) that the eastern languages fit in fairly well with the great mass of Australian languages, although with a basis that is strange and local. Some languages which are now almost extinct, such as Amarag and Gagadju, still stand apart: they may be regarded as the first stratum of Arnhem Land languages; others, such as Gunwinjgu, which has practically supplanted them in the west, as a second, and one with more EA content than the older ones. This will not be illustrated here. The next vocabulary to be used here will represent the element that is common to the eastern languages, the so-called Murngin or Yulngu Group. This has many features of the WD languages, and looks like an enclave of these languages in Arnhem Land.

A similar comparative vocabulary of the same set of words as was used for Tiwi now follows.

English	EA/CA	Yulngu	Comment
<i>beard</i>	ŋanga(r)	ɖa-warag	ɖa is a common root for <i>mouth, eat</i> (probably EA)
<i>big</i>	bu ga,bunda	jindi	
<i>black</i>	ma u	gurnan,mo:l	
<i>blow with mouth</i>	bu-	daŋgur?jun	
<i>bone</i>	ɖarga	ŋaRga	not related: d > ŋ unlikely

English	EA/CA	Yulngu	Comment
<i>boomerang</i>	ga!i	ga!iga!i	this is a specifically WD root
<i>breast</i>	ɲamaŋ, bibi	gumur	
<i>burn (intr.)</i>	gamba	daŋalguma	transitive form
<i>camp</i>	ɲuraŋ	wa:ɲa	
<i>crow (n.)</i>	wagaŋ	wa:g	Australian, but also *wagura possible relative
<i>ear</i>	binaŋ, guRu	buduru	
<i>earth</i>	ɲuraŋ	munada, dju!ga	
<i>eat</i>	da-, ɲa-	luga	
<i>egg</i>	gambu	mabu	
<i>emu</i>	ɲunin	wurban	
<i>eye</i>	miriŋ	mil	EA, but there is also maŋudji
<i>father</i>	baNbaN	baba	EA?
<i>fire</i>	waru	guRda, ɲurdja	the second may relate to ɲuraŋ
<i>fish</i>	gwiŋaŋ	gwija	EA
<i>food (veb.)</i>	maji	ɲada	seems to link with *ɲa, eat
<i>foot</i>	dinaŋ	nugu	
<i>give</i>	ju-, wu-	guruban	
<i>go, walk</i>	jan-	mardji	
<i>hand</i>	maRaŋ	goŋ	
<i>head</i>	gada, walu	!iya, gongu	
<i>hear</i>	wina-, wuna-	ɲa-ma	
<i>hit with hand</i>	bu-	wuddun	
<i>man</i>	baduŋ	ju!ŋu	
<i>meat</i>	minja	ɲanag	
<i>moon</i>	gagara	ɲa!indi	
<i>mouth</i>	dagaŋ	da	shorter form da in some languages.

English	EA/CA	Yulngu	Comment
<i>nose</i>	mura(ŋ)	ŋuru	in contrast with ŋuRu, <i>from</i>
<i>one</i>	? gudju	wanŋanj	
<i>see</i>	na-	na-ma	agreement with EA
<i>shin</i>	daraŋ	wombal, balwag	
<i>sit</i>	nin-	nina	agreement with EA
<i>skin</i>	gula(ŋ)	galŋa	possible agreement
<i>small</i>	djuŋu		no common root
<i>smoke</i> (n.)	burin	diliwur	
<i>speak</i>	wanŋa	wa:ŋa	apparently cognate in spite of ŋŋ - ŋ
<i>spear</i>	guridada	gaŋa	
<i>stand</i>	ŋaRa-	dara,daja	
<i>star</i>	biŋdiri	ganju	
<i>stone</i>	buli	gunŋa,baŋa	
<i>sun</i>	dundu	wa u,walir	
<i>take</i>	ma-	mara-ma	cf. EA maRaŋ, <i>hand</i>
<i>they</i>	dana	walala, dana(l)	dana(l) forms in northern subgroup
<i>tongue</i>	dalaŋ	maŋa,ŋanar	
<i>tooth</i>	liraŋ	lira	EA
<i>tree</i>	? yiwara	daRba	
<i>two</i>	buladj, gudara	marma,bulal	bulal in north
<i>water</i>	gabi	gabi,gabu	
<i>we two</i>	ŋali	ŋali	in all the languages
<i>what?</i>	minan	na	
<i>who?</i>	ŋana	jol	
<i>you</i> (sing.)	njin	ni: ,nunu	
<i>you</i> (plur.)	nura	numa	

### 6.3.3. Other Areas

A longer vocabulary of Gulf languages has already been given: its message of lexical diversity is the same as the two immediately preceding this section: varying degrees of common vocabulary, from eighty-eight or so percentage for WD down to a practically negligible amount. All this has surely the historical message that there is no one common ancestor for Australian languages. Structurally, too, the same message is received: there is a certain amount of structural similarity, a certain amount of structural development, but not one hundred per cent. The division into prefixing and suffixing languages may be explicable historically in ways previously suggested, and there is enough common material in the languages of the two types to justify a feeling that once there was ultimate unity of type, and that syntactic change can account for the dichotomy. Even so, this accounting is incomplete when it comes to the level of lexicon, and the conclusion is nevertheless almost inevitable - that Australian languages fall into strata defined by different periods of entry into the continent. All are old, and perhaps O'Grady's diagram to which reference has already been made offers the best picture of the process at present available. In the absence of written history, and in view of the antiquity of the languages, perhaps nothing further can be concluded, and it is wise to accept the limitations.

However, one further set of words is given in comparison with EA/CA - from the extreme south of the continent: Yalalde, in the extreme south-east of South Australia. The aim is to show that the great divergences from a possible common ancestor are found not only in the north and east but also in the south. The languages of Victoria eastward from Yalalde almost as far as Gippsland are similarly divergent, but each in its own way. No study has yet been done on a language-to-language basis, as the lexicostatistic method demands, but the inter-resemblances are not great and the resemblance to EA/CA standards no greater than in the north. The great interrelationships between the EA/CA languages occupy the centre rather than the circumference of the continent. Yalalde is given here without a 'comments' column. An asterisk before a Yalalde word does not mean in this instance that it is a reconstruction, but that it is or seems to be in the EA/CA sequence.

English	EA/CA	Yaralde	English	EA/CA	Yaralde
<i>beard</i>	ŋanga(r)	meragi	<i>mouth</i>	dagaŋ	dori
<i>big</i>	bu ga, bunda	gra:w	<i>nose</i>	mura(ŋ)	gobi
<i>black</i>	ma u	g neman	<i>one</i>	? gudju	jamali
<i>blow with mouth</i>	bu-	gemb-	<i>see</i>	na-	*nag-
<i>bone</i>	ɖarga	badbad	<i>shin</i>	daraŋ	guri
<i>boomerang</i>	ga i	bangadji	<i>sit</i>	nin-	lew-
<i>breast</i>	ŋamaŋ, bibi	ŋumbura	<i>skin</i>	gula(ŋ)	waŋandi
<i>burn</i>	gamba	guld-	<i>small</i>	djugu	muralagi
<i>crow</i>	wagura	waranaŋi	<i>smoke</i>	burin	gari, nawuldi
<i>ear</i>	binan	blombi	<i>speak</i>	wanga	jaŋ-
<i>earth</i>	ŋuraŋ	belebi	<i>spear</i>	guridada	ja:ŋɖi
<i>eat</i>	da-,ŋa-	yay-,dag-	<i>stand</i>	ŋaRa	dajul-
<i>egg</i>	gambu	beladi	<i>star</i>	biŋɖiri	duldar
<i>emu</i>	ŋunin	binjali	<i>stone</i>	buli	meɖi
<i>father</i>	baNbaN	naŋay	<i>sun</i>	dundu	nunŋi
<i>fire</i>	waru	geni	<i>take</i>	ma-	bindamel-
<i>fish</i>	gwijaŋ	mami	<i>they</i>	dana	gar
<i>food (veg.)</i>	maji	ŋuni	<i>tongue</i>	dalaŋ	*dalangi
<i>foot</i>	dinaŋ	duŋi	<i>tooth</i>	liraŋ	*duri
<i>give</i>	wu-,ju-	bemb-	<i>tree</i>	? Jiwara	jabi
<i>go,walk</i>	jan-	ŋo-	<i>two</i>	buladj	*buladji
<i>hand</i>	maRaŋ	duŋi	<i>water</i>	gabi,gugu	*ŋugi
<i>head</i>	gada,walu	gu i	<i>we two</i>	ŋali	*ŋel
<i>hear</i>	wina-,wuna-	guŋ-	<i>what?</i>	minan	*minji
<i>hit</i>	bu-	memb-	<i>who?</i>	ŋana	*ŋangi
<i>man</i>	baduŋ	go:ŋi	<i>you (sing.)</i>	njin	*ŋindi
<i>meat</i>	minja	ŋald	<i>you (plur.)</i>	nura	*ŋu
<i>moon</i>	gagara	margeri			

The vocabulary of the Dampier Land languages differs from dialect to dialect, although they form a single group, but the proportion of EA/CA material is not large. The 100 wordlist gave an average of some 30%. Moreover the occurrences vary from dialect to dialect. Thus, \*gambuŋ, *egg* appears only in Njigina, but there is a parallel gambin elsewhere: this word has been discussed as a multiform root in 2.4.2. Another of the words there discussed is \*mijil(lŋ), which appears in Yawur as -min but Njigina as -milgar, with an unexplained addition; \*maji, *vegetable food* is in Njulnjul maj. \*BaNbaN, *man* appears in all the languages as a form of wamba, as already discussed, and has close parallels in Cape York; see again 2.4.2; \*bibl, *mother* in Yawur is a local variant for *breast*, but Bard has ŋamara, which seems to be a form of CA \*ŋamaŋ. Bard bala, *here* looks like a form of the EA ba (ergative ba-l(u), *he, she*). There are occasional direct links with CA as na, wa, mi, *give* (wa is also CY), and in other parts of Australia there are wu, ju (including Victorian Wembawemba and Djadjala) wu, a presumably EA root to which CA answers with \*ju: -mala, -malj, *hand* is EA \*maRaŋ: Yawur and Njulnjul in this case, cf. CY maļa, CA \*maRaŋ and perhaps Njulnjul ari(jaŋ), *no, not*, may answer to CY kari.

In other cases, disagreement among DL languages is radical: *good* is in Yawur mabu (found also in Garadjari); Njulnjul laib. Yet the common auxiliary \*bu, *hit* is entirely absent, even from the heavily NK-influenced Warwa. Conjugation by auxiliary is well developed (Capell 1953) though with a totally different series of auxiliaries from those generally in use in Australia, and with prefix conjugation but without object incorporation.

The CA words found include the following: \*bibl, *mother* (Yawur) \*liraŋ, *tooth* here *mouth*, \*ŋamaŋ, *breast*, \*dalaŋ, *tongue*, here djalanj or djaŋalanj, a southern word for which Njigina has angal.

Within the 100 wordlist, aside from CA cognates such as the above there is much disagreement: Yawur, Njulnjul and Njigina share 56 words, some of which are CA but the majority are not. Some typically WD words are found, such as djingu, *fire*, cf. Bidjandjadjara djun-ba, *ashes*, gular, *west*, cf. WD wuluRara.

Other words are CA but with change of meaning; not only is this so, but two different CA roots may occur in DL languages with the same meaning, e.g. *mouth*: (1) -lir, -ler, in Yawur, Njulnjul, Njigina and Warwa = CA \*liraŋ, *tooth*; (2) Yawur djawa = CA \*da(wa), *mouth*, but immediately to the south Bunara has djalanj, *tongue* = CA \*dalaŋ, and in Yawur and Warwa, djalan = *tongue*. Where the languages agree, there often seem to be no links with other parts of Australia, as is the case



for *fall* and *fish*. Yet there are often agreements with regions far distant, e.g. Bard buRu, mainland DL bur(u), *earth*, *camp*, which occur in Murawari (New South Wales) as well.

Of the numerals wandjari, *one*, of which Bard aRindji seems to be an inversion, seems to be independent, but gudjara, *two* is CA = WD.

In the field of general vocabulary there is an interesting word gulin, *sleep*, which may connect with NK gulin, *lay egg*, which recurs in Perth district as adjinj and Wembawemba (Victoria) as gulin, *man* (Schmidt's 'Kulin languages') as well as Ngarinjin (NK) gulin, *lay an egg*.

#### 6.4. The EA/CA Element: Corridors Revisited

Schmidt (1919a) sets out for each of his subgroups a set of words to be traced as characteristic for that subgroup. These words - or in some instances variable shapes of shared words - are usually EA/CA, although some do not seem to belong to either group. Such words, of course, may represent a stage of language earlier than most of our EA: this question cannot be looked at here but needs to be studied at some stage of investigation. They may help to untangle the stages represented by the symbol EA<sub>a...n</sub>.

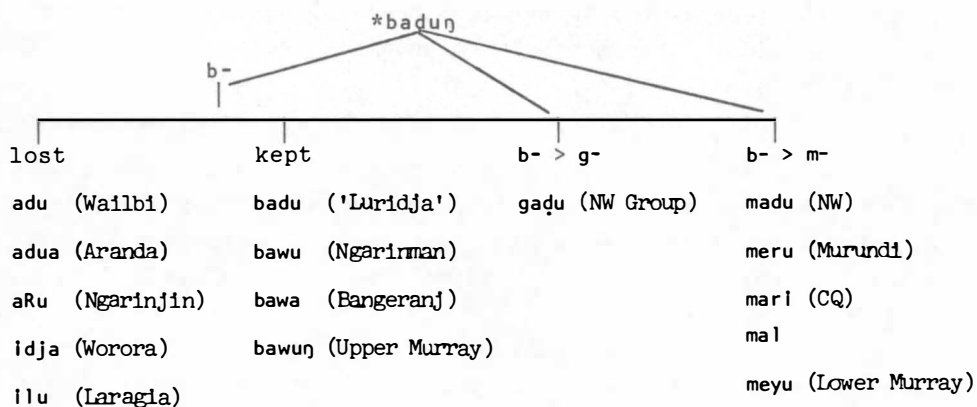
Such being the case, the only possible further work is to deal with lexicon that can be called either Early Australian or Common Australian. As to whether languages of the types just considered owe any characteristics to external origins or external influences, no clear conclusions seem attainable. For discussion of possibilities in this field, see Wurm 1975:915ff.).

Therefore leaving the 'substrata', if the term is right, it is best to consider the various strata that can rightly be called Early Australian first of all, and then proceed to consider the real nature of Common Australian. It is true that the author when he proposed this term had wider ideas for it than he has now, but the term itself need not be discarded. The next step therefore is to take these two subdivisions of the Australian language totality and deal with them separately.

Before passing on to individual items, it is worth noting that in Australia there has been a considerable tendency to change meanings of a root, just as in New Guinea and other places. Indeed, it is sometimes difficult to determine which was the earliest meaning of a root, e.g. *breast*, *mother* (\*bibi, \*ŋamaŋ); which was earliest? And the former - \*bibi - can even mean *father* occasionally, and other kinship terms can change gender in a similar puzzling manner. A single root

may mean *head* in some languages and *eye* in others; *mouth*, *tongue* and *tooth* seem to interchange meanings indefinitely. In less frequent cases, even wider changes of meanings can occur. According to O'Grady (1966, word 628) the root meaning of \**ɲarga* is *beard*, in some of his Ngayarda languages, but in Waljbiri *ɲarga* is *man*. Amongst adult aborigines, the *man* is marked by his *beard*. This is not an isolated instance and others will be recalled. O'Grady, in his contribution to this volume, also develops the idea of antonyms, as one of the causes of change of meaning, and this raises still more difficulties, even if also the possibilities of more common words.

To illustrate the interaction of phonological rules, it is convenient to look at the widespread word \**baduŋ* for *aboriginal adult male* (without reference to social status) in its local occurrences. It is a CA root occurring widely in the Western Desert areas, where one of the groups has been called by O'Grady 'the Wati Group'. Looking first at the changes of the initial consonant, we see:



Other incidental changes (in the middle consonant) can be seen here as well as occasional changes in the vowels. Still other minor variations are noticeable elsewhere, such as Marawra *mali*, S.E. Bungandidj *mara*, Inland Yuwinj *marin* (where, as usual in this area, the final consonant is preserved but in the unusual form of  $n < \eta$ ), Gamilaray *mari*, where it contrasts with *gibir*, *initiated man* which has relatives elsewhere, including apparently, Tasmanian *wibar* (Plomley 1976:317), but this could be a loanword after settlement in Australia of the whites. There is also a group of Daly River languages showing *meri* (Tryon 1974:271).

As against this, there are other quite widely spread forms for *man*, e.g. \*bama, which has been used in the hypothetical 'Pama' languages in the Pama-Nyungan Family. In Dampier languages, as in Cape York there are forms of wamba, wamb, amb, abm and some other variants. It is hard to connect these immediately with \*baduŋ but they can be connected with \*baN (in which N stands for any nasal consonant), reduplicated as baNbaN. This baN could, indeed, represent \*ba(du)ŋ but this cannot be proved. In Victoria there are forms of beŋ, baŋ, which seem to belong too, while in Iyora (Sydney) and some neighbouring languages bijaŋa = *father*, the senior 'male' of the family. Such further connections as these remain, of course, problematical but quite possible within the time depth.

In south-west Queensland there are forms of gaŋa(j) from which Schmidt named his Kana Group: gana is the usual form in these languages, but Gippsland gaŋay (in the 'Kurnai' language) may link with it.

The most notable word, however, is \*gulin, already mentioned, and in the form Kulin used by Schmidt as a title of the western Victorian groups. This appears in the Central Corridor in Ngarinjin gulin, *bear offspring*, in the far south-west in Wadjug and Njungar adjin, *hatch*, as well as in western Victoria gulin, *man*, eastern New South Wales guRi, *man* (here sometimes contrasting with guri, *ear*). It is just possible that Schmidt's yuwin form in these areas may link with it.

There are still quite a number of other words for this concept, which cannot be listed here: the whole set serves to illustrate the unity-in-diversity which is the Australian Group of languages. They must wait for further discussion until an Australian comparative dictionary can be worked out. The Victorian languages are of particular interest in such a scheme, for they seem to have three strata: local words, which show considerable differences, local plus Northern Kimberley vocabulary through the Central Corridor, and a CA element which appears in the structure of some of the languages, especially in the AT phenomenon.

#### 6.4.1. Regional Studies of EA/CA

The preceding lists will have stressed the variety within EA/CA. This variety has been irregularly studied. The two fullest studies to date are O'Grady's (1966) on the north-west and the desert languages of central Western Australia and Kenneth Hale's on Cape York (Hale 1964, 1966). In the former some hundreds of words have been studied - a group of 137 which O'Grady has found only in the Ngayardic languages:

these have been referred to earlier; further, some hundreds more which can be traced in other parts of Australia. These latter are of particular importance for deciding the scope of EA/CA. They link up with Hale's study which begins from the other side of Australia, so that between them the entire northern half of the continent receives good initial covering. Sommer (1969) has compiled a vocabulary of proto-Australian, 'proto-Paman' based on Hale's list which makes interesting comparison with others compiled from other sources. Only the briefest results can be set out here.

The lists from the two sides of the continent do not by any means coincide. For example, Hale's \*kuuku, *speech, language*, is limited to Cape York, and the term 'proto-Australian' needs to be reinterpreted if applied to such regional lists. It must be read merely as 'proto-Cape York' and there is no basis for treating such limited words as proto-Australian. They may actually be so, but it cannot be proved. To treat them as such gives a quite false idea of present attainments in such studies, and if the present work accomplishes anything at all, it is an attempt to introduce proper perspectives into what must be at all times a difficult reconstruction of completely lost languages - which almost by definition is in any case impossible. Some of the lists of Hale and Sommer, if valid beyond Cape York, point to at least dialectal differences at the proto-Australian level. Sommer gives wa-, *give*: elsewhere the root is restored as \*wu- or \*ju-, not \*wa-, and this points to an as yet not understood variability of vowels even in the three-vowel languages.

Schmidt in his *Gliederung* is ultimately the source from which the present author first gained his idea of a 'Common Australian', now subdivided into Early and Common Australian, so it is fitting to return to his work, for by picking out regional variants, something can be added to our present knowledge of common words including pronouns. Schmidt in the second part of that work really indicated possible local - or temporal - subgroups that may be of importance in the further development of the historical linguistics of Australia.

#### 6.4.2. Distribution of EA Material

Thorpe's suggestion has already been mentioned, viz., that early migration may be presumed to have followed the coastline before breaking into the interior and crossing the continent. This had been adumbrated already by A.L. Kroeber (1923). His distribution charts showed that 'a general distribution of one stratum' (usually placed

first in his lists), with a 'tendency to spread nearly all round the coast and eastern interior, missing the north-west coast, north coast and Cape York'. This, of course, supported the idea of entrance via Cape York and the spread southwards and southeastwards through the immediate hinterland, and this seems natural inasmuch as these are well watered areas inviting habitation. Here, too, the languages are numerous and cover comparatively small areas. It is worth looking at a linguistic map of the area to see that this is actually true at the present time. He also suggested that the entrance point was later swamped by - possibly - Papuan immigrants. Though there may have been such a later entrance, the idea of its Papuan origin - in the modern sense of 'Papuan' - needs reweighing. He also suggested that the Kimberley peoples really came via the north-western sea route, but combined with an earlier branch of the common Australian race, who are still represented by the peoples of Forrest River region and others around them. This suggestion is more easily open to doubt.

A study of Kroeber's very useful maps of word occurrences is perhaps a help to test out Thorpe's later theory and at the same time to suggest relative ages of certain roots, although this must always be risky. To some early stages of EA movement some words may tentatively be attributed in terms of their occurrence along the coasts or inland. The weakness lies in the impossibility of deciding whether a coastal word represents an early movement and an inland word something later, or whether an inland word represents a group of people driven from coast to inland at some later stage. Here the frequency of occurrence is a possible guide. Thus the common *mil*, *eye* < \**mijil(iŋ)* is by far the commonest of the names for this part of the body; \**guRu* is chiefly western with a predominance in WD languages, so that it would seem to be CA and later; \**dili* occurs chiefly in Cape York and inland Queensland. These cover most of Australia, but there are still other words of very limited occurrence, at whose origin it is at this stage hardly possible to guess.

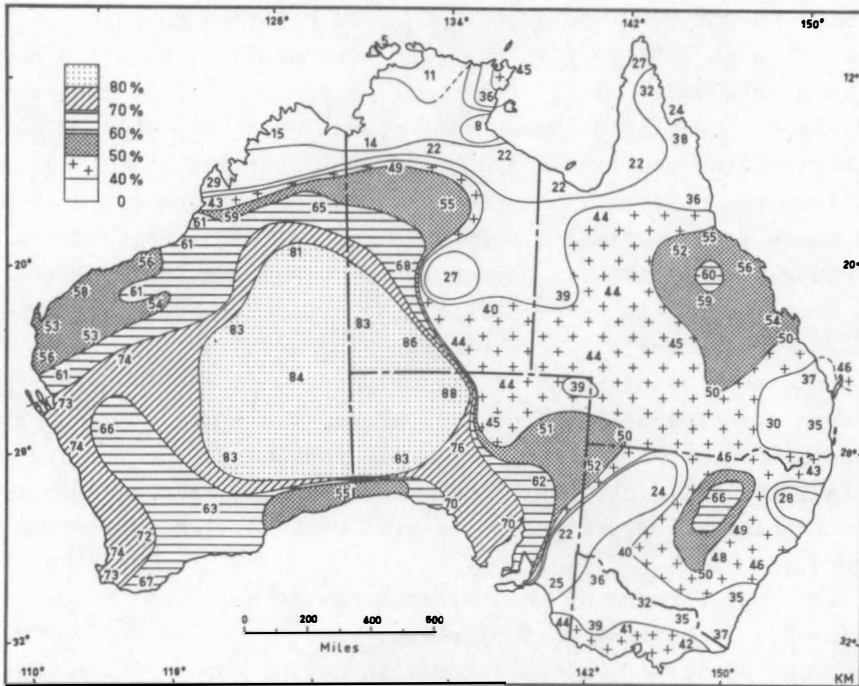
With this introduction it is perhaps possible to set out some lists of words, not mapped, as done by Kroeber and ideally needed in the present instance but suggestive of historical reality in varying degrees. In some cases words appear over widely separated areas, and here it may be that lack of information prevents identification with any surety: there may be further agreements in intervening areas, e.g. *seagull*: Njangumarda *dara*, Gubabwiyngu *dara:g*, Umpila *djara* (O'Grady 1976:63); and in the same article Bandjima *mirilji*, Ngarluma *miri:dji*; Umpila *miʔin*, *string*; and Njangumarda *njara*, Pintupi *njara*,

Gumbainggar dJaraŋ, Umpila ŋaʔa:l, *that, in the distance*. In many cases further examination is needed, for examples such as these show presumable cognates from west to east coast, inland and in the northern part of New South Wales. None of this can be quite accidental. Similarly, Curr (1886,II:426) quotes from Halifax Bay (Njawagi?) mero, *wommerā*, and adds 'which prevails so extensively on the west coast, two thousand miles off, is also found in this and in the languages of Hinchinbrook Island and Port Mackay'.

The original list of 'CA' words was worked out to the number of 48, and from those a map was constructed showing their local occurrences in a large number of languages. The same method is applicable to others. To date the figures for occurrence in each language have not been published. The map simply shows the percentage of 'CA' words to be found in different areas. These words are now recognised to be a mixture of EA and CA and at this stage are better referred to as 'EA/CA' as has been done above. We now proceed to set out the lists by the numbers of the words themselves. This enables a further subdivision to be made in terms of the local occurrence of each word, by which EA can better be distinguished from CA. In this way the work can be expanded by any number of subsequent additions, even to the full length of a dictionary.

One comment suggests itself immediately. It does not look as though CA is radically different from EA but rather that the former is a later stage of the latter, much as Middle English is a later stage of Old English. Much as many Old English words disappeared, whether from local disuses or through replacement by such as Norman French, so CA may function in the history of Australia. The loss of a final -ŋ in CA where it is documented in EA, simplification of phonological patterns in WD languages as compared with those farther east, fit quite easily into such a process. There will still remain the isolates, whether in northern Australia or in the south or anywhere else, and judgment on them will be made independently. It is even possible - at least theoretically - that Tasmanian languages may have occupied the mainland of the continent: no such proposition is put forward here, but neither is its possibility denied.

If CA is in the main a later stage of EA, then the grammar of the languages in which CA rules will have been radically changed. The formation of pronouns in the CA languages suggests strongly that the pre-languages were structurally different. They may well have resembled Warnman in having pronouns based on noun roots with possessive suffixes to distinguish person, a set of markers which were



Map 7: Distribution of Common Aust. Vocabulary Reflexes

deictic and numeral indicating, and perhaps also different syntax, leading some languages to develop AT constructions owing to a preference for SVO over an earlier SOV. These two types of syntax would simply have resulted from different crystallisations of an originally free order which is still attested in parts of Queensland.

There is one presumption in the preceding paragraph: that WD languages (which are the basis of CA) are later than EA. This can be justified especially if such maps as those supplied by Kroeber are studied. In these most of the agglomerations of words are in the eastern half of the continent, and this does not seem to be an accident. It also fits in with the other presumption, that the movement of languages came chiefly from west to east. If this movement occurred, as has been held throughout, round about 6000-5000 B.P., then both direction and lateness of date are justified.

Apart from the comparatively few words that have been set down as EA or CA there is in Australia only a set of regional vocabularies, held together by a remarkably common scheme of grammatical construction. Why this should be so is extremely hard to decide or even to suggest. It has been remarked on as in Amerindian languages, all of which exhibit the strong development of the polysynthetic type, however much they differ in vocabulary. Within a subgroup there may be much closer resemblance in vocabulary and grammar. In aboriginal America the various families fall into obviously related groups, although it is much more problematical whether there will ever be a proto-Amerindian established.

Some views put forward by the Polish linguist Milewski (Milewski 1965:158-9) have a bearing on the present discussion and are worthy of quotation. He speaks of Palaeo-Australian as the group of languages predominant in the south-east of the continent and describes them in the following terms, which are not an impossible solution of the problem. His views are based on a study of Schmidt's *Gliederung* analysed according to the Czekanowski method (Milewski 1948, English translation summary p. 389):

'Up to the middle of the nineteenth century the site of present-day Melbourne was occupied by languages of the Palaeo-Australian family (Kulin, Kolinon, Buandik) and on the River Murray dialects of the Narrinjeri family ruled. This was the southern edge of the continent. They had not yielded to the process of unification, which ate into the rest of the area and led to the rise of the great Central



Australian family. In the full process of time it occupied the whole of Australia except its southern limits. The proto-family crossed over from New Guinea through the islands of the Torres Strait and Cape York Peninsula. A second expansion in full strength of a completely different linguistic type, it imposed on the whole area of unity in grammatical principle. The unification of vocabulary did not spread so far, and led to the establishment of some peculiarities with regard to dialectal groups.

'Between the two great families of Central Australia in the south and Austronesian on the north there stretches a region of about 150 small language families, which we divide from geographical viewpoints into two sets: northern Australian and Papuan. To the Central Australian set we assign the Aranda family, which intruded from the north into the very centre of Australia, and in addition to that about 30 small families, which came from New Guinea into Arnhem Land, on the coast of the Gulf of Carpentaria and Cape York Peninsula. In all these regions they overlaid the dialects of the Central Australian family.'

Serious doubts may be cast on the last few sentences but at least in the absence of definite information to the contrary, they are at any rate worthy of thought.

Wurm (1975:290ff.) has already suggested connections between Cape York and south-western New Guinea - and indeed elsewhere in New Guinea - whether by borrowing from south to north or not, and some at least of the cases seem genuine. Capell also (Capell 1942:29) showed relationship likely between Gunavidji, on the central north coast of Arnhem Land, and the languages of the western Torres Strait. These are set out again here:

English	Gunavidji	Torres Strait
<i>one</i>	Rabana	warapone, urapon, etc.
<i>tongue</i>	daŋal	daŋ ( <i>tooth</i> )
<i>ear</i>	gala-	goura
<i>hand</i>	gudjl-	geta
<i>bone</i>	ida-	rida
<i>kangaroo</i>	ridjbara	udjar (Mawng) gudjbayari
<i>egg</i>	jo:gara	gagura
<i>ground, camp</i>	wiba	aba
<i>what</i>	ŋale	nalu (Gumulgal)

He remarked on the distance between the languages as making the comparison less sure, as well as the uncertainty of any regular sound change; yet it is possible that further examination of southern New Guinea and North Australia may strengthen the possibility, and justify Milewski to that extent.

Amongst the examples cited by Wurm, however, a number seem to be exclusively Cape York regional language, for some of the words are neither EA nor CA, e.g. *hair*, \*jaŋan, for which \*maRa seems to be EA, and O'Grady gives \*kuku-Ra as proto-Pama-Nyungan; for *hear*, CY \*kuli is WD, i.e. CA, but there is also CY \*ŋami, and CY \*kuman, *thigh* answers to EA daraŋ. There is therefore still much uncertainty, and Sommer (1967), based on work of Hale which is itself included in Hale (1974), shows a great deal of disagreement between Cape York and the languages to the south and west. This means that there is a Cape York regional language to be reckoned with also.

When Australia is examined as a whole - which cannot be done here - what appears is a mass of regional vocabularies, with a fairly common grammatical pattern in the languages, and an extraordinarily similar phonology throughout the continent. This is precisely what Schmidt had suggested in his two works, and Milewski's interpretation seems to make clearer.

### 6.5. Summary

The present paper is only a first approach to a vast subject, and this is more difficult in the field of vocabulary than in that of structure. It is now time to present a summary of the whole problem. Certain propositions are therefore put forward, all of them still awaiting proof or disproof. The propositions are:

1. The proto-Australian linguistic pattern consisted of a number of apparently unrelated languages. These would all have come in at various times from various directions, but all ultimately from the north-west, via the now lost Sundaland. Little resemblance can be traced now between them: all are classified as Early Australian (EA), and even if the terminology EA<sub>a...n</sub> is used, this does not mean anything in practice, as the component elements cannot be isolated into a series of languages belonging to different times. As shown in O'Grady's diagram, many languages probably died out without descendants at all, and cannot now be traced. Presumably they set the phonological pattern which developed later only in certain points:

the common basic Australian phonology goes back to such early languages, indeed may represent the pattern of phonologies in many parts of the early stages of human speech. This is where it is important to recall the fact that proto-Australian languages antedate any existing languages by many thousands of years. Such developments show in the absence of a voiceless-voiced contrast between plosives, such as still appears in some other parts of the world as well as Australia. The development of more than one set of laminals would also have begun in these unrecorded times, and in some, especially WD languages, distinctions of the laminal series is still uncertain, as for instance between Ooldea and parts of the Western Desert farther north. A late movement will have brought in the three vowel languages, but even in this there is considerable phonetic variation. During this stage, which could have included Tasmanian (unprovable but by no means impossible), distinction of number in nouns and pronouns was probably absent. The elements which are used to distinguish number in the modern languages all have a local appearance, and all seem to have developed locally. At a much later stage there is still confusion, as for instance in the use of \*buladj to mark duality in most languages, but actually to produce also *bula* as *they* plural, in some languages of Cape York Peninsula, where the duality is no longer expressed by the word, but simply non-singularity. Syntax would have been relatively free and uncomplicated: different patterns crystallised out later in different areas.

2. One group of such languages spread, as again suggested in O'Grady's diagram, and this is the group here referred to specifically as Early Australian (EA). It was perhaps never simply a unity, or at least suffered very early dialectal modifications. The commonest vocabulary throughout the continent marks this group. This is the group to which the present author referred in his 1956/1962 work as 'Common Australian' or CA. It would now seem that this term is better kept for a language or for a group of languages which moved from west to east at a date later than the EA stage. Again, this was probably never a single language, but a group of related languages developing about the Ord River-Wave Hill region. It is relatively later than the others, and may be connected with the cultural development that Mulvaney has shown to have moved eastward about 6000 B.P. or earlier. If Dixon's figure of about 10,000 B.P. for the Rain Forest languages of north Queensland has any value, this would mark a stage of the EA spread before that of CA. In fact CA may be even older. The archaeological evidence for improved hafting techniques demonstrated

by Mulvaney and others would be part of this movement or an outcome of it, and the date of about 18,000 B.P. for the Miriwun findings in the Ord Valley would be part of the same picture.

An extension of movement from one or more centres in this region is noticeable in the spread of CA vocabulary (and perhaps certain structures also) in three directions: westwards along the north coast of Western Australia, along the Ninety Mile Beach and the interior of that region, southwards along the centre of the continent into north-western Victoria and thence into New South Wales, both coastal and interior and eastwards into the Cape York area. In the last mentioned there were already regional languages which could have entered via New Guinea, but belong to the EA period described in the preceding paragraph (1). These will be mentioned again below. This Cape York movement would be earlier than the 10,000 B.P. mentioned by Dixon.

3. The preceding paragraph suggests that the so-called proto-Paman is post-CA, i.e. very late. The Rain Forest is estimated to have come into being before 7600 B.P. (Dixon 1970a:351 *et al.*). The north-east route of CA would then have been covered during the period between these two dates, but Cape York Peninsula was by then already inhabited, and proto-Paman represented an amalgam of earlier and later peoples.

There has been earlier discussion about this word \*pama, from which two points emerged. The first that it is shared by the Regional Isolates of the Dampier Land area with the Cape York languages (3.3.3.), and that its ancestry is not quite clear (2.3.1.). It seems a very unsatisfactory designation for a large language family, and especially for that of Cape York. It appears (see Sutton 1975 *passim*) that the Cape York languages have indeed a considerable element of CA, but also a large element that is not CA. Such a word as \*dunga, *weep* appears in CY as \*Runga, but it also appears in the north-west of Western Australia (O'Grady 1967), and along the eastern coast of Queensland and as far south as Sydney, where dunga is given by the early writers in the same sense. This looks like EA and quite clearly so. Some of the CY vocabulary can indeed be so classified, as EA rather than CA, while much is entirely different, e.g. \*djamal, *foot*, as against EA/CA \*dinaŋ. At the same time the final -ŋ of such EA words as this make the CY examples seem to have come through the later CA rather than EA, for a final consonant, including -ŋ, is not forbidden in this area.

The CY pronouns are diagnostic in a high degree. While the actual roots are EA, the forms they assume are frequently not so and are often not CA either. In CA (especially its WD forms - see 3.5.) there are

not common independent pronouns beyond the second person singular and the dual and plural substitutes are built on very definite and peculiar lines. Hale is certainly right in holding that the WD pronouns are late manufactures though it has been argued that they are from a factory different to that to which he assigns them. This assertion applies also to CY, and in this case it is clear from what follows. The CY pronoun roots are already in the ergative form, e.g. \**ŋa*-ju, \**ŋun*-dju etc. but these are usable with intransitive verbs as with transitives. In the northern languages they also carry a postfix \*-*badj*, as for example, in Uradhi *aju*-va etc. (3.4.). It appeared there that this is a very specific suffix common to ergative and other languages, as far apart as Arnhem Land (Nunggubuyu, Mawng, etc.). South Australia (Yaralde, Meyu) and in Cape York and north Queensland (Djirbal). It is some form of EA and early at that, for it seems to have belonged to a language that spread widely in a way not characteristic of CA. The dual marker \**buladj* plays a special part in CY, as has been mentioned, and the implication of this part is that its nature as a dual marker had either been lost or was just not understood. It refers to locality - *over there*, not to *two* as a number, and frequently \**bula* is *they* plural. On the other hand interrogatives are built on a \**ŋana* root rather than the *wa*- form which characterises EA and is found in the Sydney area where *wa* is *where?* Yet in other parts of CY, \**wanja*/i/u is found as *who?* and \**wanjdja* as *where?* and even an ergative form \**wanjdju* as *who?* There has been much intercrossing and mixing in this region of Australia.

Apart from these pronouns, that show considerable admixture from various sources, much of CY seems to be early, earlier in fact than the development of four laminals; yet there are meaning changes in some EA words adopted, e.g. \**liraŋ*, *tooth* > *tongue* (Sutton 1975:107), suggesting the misunderstanding of a foreign language coming into the region.

Subgroups of Cape York languages have developed later, *in situ*; 'Central Paman' would seem to be the earliest form. There is a considerable amount of non-EA/CA vocabulary in the region as a whole.

In general, the nomenclature at present in use for Australian languages as a whole is not satisfactory. The Pama-Nyungan family is particularly badly named. The word \**pama* is not a CA word; the root for *man* is \**baduŋ*, and the suggestion made above that \**pama* may = \**ba*(*ma*)*duŋ* is insecure (see 2.3.1.). Rather \**pama* looks like a derivative of \**baNbaN*, reduplicating a root that appears in Victoria and New South Wales as *beŋ*, *biana*, either as *man* or as *father*.

'Paman-Nyungan' is therefore quite an unsuitable word. 'Pama-Maric' is worse, as \*mari is a Queensland form of \*baduŋ itself! Not only are such terms uneven yoke-fellows, they are rather like yoking a horse with an ox to pull the plough! In fact, the whole classification on the present language maps, as used in Wurm (1970) is unsatisfactory, but it cannot be improved until vocabulary comparison is done on a much wider scale than at present. Australia is much more than a dichotomy of Pama-Nyungan v. the rest. But PP and western CA are key elements in the solution of the problem; the lock into which they fit is the non-EA/CA sector that has been partly studied here.

4. The extra-continental relationships of the Australian languages have never been worked out - most feel that there are none. For certain possible connections with New Guinea, reference should be made to Wurm (1975). The next stage is the full vocabulary comparison and the time is ripe for this task.

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