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ABORIGINAL CATEGORISATION OF NATURAL FEATURES

(AS ILLUSTRATED IN THE WESTERN DESERT)

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Teachers might like to consider the implications this article has for their teaching strategies and for the manner in which they interact with their Aboriginal students.

THE CALL FOR TAXONOMIC STUDIES IN AUSTRALIA

In an article on "Maranao Plant Names", written in 1965[1], Howard P. McKaughan of the University of Hawaii remarked,

> "Sometimes different Maranao names are given by the people for the same plant at different stages of growth; sometimes the same name may be applied to different plants -- the reasons not apparent to the investigator -- ; finally different people may give different names for the same plant, or different localities may use different names for the same plant. The Maranao have their own taxonomy which may differ slightly in different localities, and certainly differs at times from that of the Botanists. The problems of describing the Maranao taxonomy cannot be attempted here. However, the desirability of doing so is great, and we hope at a later date that it may be undertaken."

Can we say that where McKaughan was in 1965 as regards this Philippino language, we are today as regards Australian Aboriginal languages?

We are producing more extensive Aboriginal language dictionaries with growing lists of Aboriginal names for Australian plants and animals; but do we have an exhaustive study of an Aboriginal folk taxonomy? For the more heavily studied areas of Australia should we

1. *Oceanic Linguistics, Vol. IV Nos. 1 & 2, 1965, pp. 48-49.*

now be starting to close the gap between cultural anthropological descriptions and the more formal studies of Aboriginal language structure? The need for such taxonomic studies in Australia is indicated in Kenneth Maddock's "The Australian Aborigines - A Portrait of their Society" (1971).

This paper is an attempt to step into the field of Australian ethnolinguistics and to draw together some material which may serve as a bridgehead for a more substantial structure to bridge the gap between anthropological and linguistic studies.

TENSIONS AND DEADLOCKS AS INVESTIGATING CLUES

Professor McKaughan's significant insertion, "the reasons not apparent to the investigators --", reminds us that it is often a seeming discrepancy in information, a sudden tension or a deadlock in the investigating process which give clues to lack of congruence between the researcher's cultural grid and that of his informant.

A classic example of this in the Australian field is found in the report of an early investigator who learned that a certain woman was his informant's "mother". Later, he discovered that another woman had the same relationship with his informant, then he discovered another and another. He finally concluded that his informant was an inveterate liar. For the trained and observant research worker such seeming ambiguities alert one to the possibility of previously unrecognized systems in the culture being studied.

A field worker, experiencing a valuable investigating session, may face unexpectedly a disappointing deadlock when his informant suddenly adopts a tense or silent attitude. On such occasions, the problem may not be the incongruency of systems, but the indigenous limitation on discussion of certain subjects. A research fellow working in a desert area in W.A., for example, found that elders of the tribe were willing to share with him a lot of information on the spiritual aspects of sex; but they refused to discuss with him the physiological aspects of the subject.

To analyse the kinds of reactions experienced by this researcher, one would need to consider the indigenous environments in which the discussions took place. For example, some physiological aspects of sex would be regarded by the desert people as belonging strictly to very intimate discussion between husband and wife alone. Others could be discussed between married women only. Matters pertaining to immediate pre-natal movements and actual birth are usually very

strictly taboo to men. On the other hand, some of the deeper spiritual aspects of human reproduction and related subjects are not to be discussed with women or the uninitiated. Not that any adult member of a tribal group, male or female, may not be capable of discussing every aspect of sex; but the question is one of extent of liberty without the interference of strong feelings of guilt because community-set limitations on topic-discussion have been breached.

The unexpected reactions of informants, then, may indicate such factors as:

.. cross-cultural communication problems

.. limitations on topic-discussion

.. breaches of established custom.

The latter subject is rather outside the orbit of this paper so I will omit further reference to it. Cross-cultural communication problems which are especially relevant to our present study are those which indicate that there is lack of congruence in the overlap between the cultural grid of the investigator and that of the people he is studying. The major part of this paper will be concerned with semantic systems which may differ in some respects from those of a non-Aboriginal research worker. The illustrations will be taken from various parts of the Western Desert language area in Australia.

Regarding limitations on topic-discussion: such limitations may be governed by the age, sex, role, or initiation status of the informant or informants. This subject introduces us to the first and probably the major categorisation in a Western Desert community.

MAJOR DIVISIONS OF THE COMMUNITY AND EFFECT ON TOPIC-DISCUSSION

Overriding the notable Western Desert social divisions into two genealogical levels and, in some areas, into four, six or eight "skin groups", is the strong distinction between *wati, minyma* and *tjitji*, 'man', 'woman' and 'child' respectively.

While it may appear that the strong contrast is between the *initiated* and the *uninitiated*, this contrast is usually maintained for the male side only, i.e., between *wati* and *tjitji* in which the first term stands for the fully initiated man and the latter for the uninitiated boy. But *tjitji* does not carry any indication of sex except in such a context, and the term *minyma* (which is applied

more specifically to a married woman with more than one child) would not come under such a generic term as *tjitji*. So the threefold division, *wati*, *minyma* and *tjitji*, seems to have prior place.

Adjectives derived from these three nouns are used to describe topics and objects. These are:

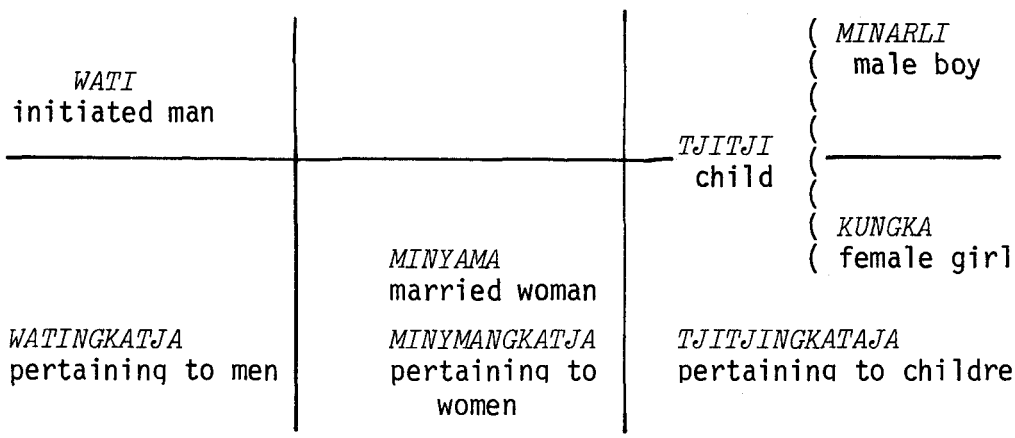
from *wati* 'initiated man' comes *watingkatja* 'that pertaining to man'
from *minyma* 'woman' comes *minymangkatja* 'that pertaining to women'
from *tjitji* 'child' comes *tjitjingkatja* 'that pertaining to children'.

In the Western Desert there is no dichotomy of adult - child as in English. In research work it is important to determine whether the topics being discussed are *watingkatja* ('men's business'), *minymangkatja* ('women's business') or simply *tjitjingkatja* ('something pertaining to children').

Such a threefold division has a great effect on the vocabulary or the "universe of discourse" likely to be used when natural features are being described by Western Desert speakers.

The male - female division is, of course, quite strong in Aboriginal societies and this dichotomy is catered for linguistically in the Western Desert. The terms used are *minarli* 'male' and *kungka* 'female', allowing for the fact that there are several dialect variants of these terms.

For words such as *tjitji*, which does not carry a meaning component of sex, the terms *minarli* and *kungka* may be appended to add this component when necessary. Thus: *tjitji minarli* may be translated 'a male child' or 'boy', *tjitji kungka* 'a female child' or 'girl'. These terms are not restricted to humans but may be used to show the twofold division of the whole animal kingdom. The following chart summarises the divisions of mankind as outlined above:



The restriction on topic-discussion between the three groups is most marked in the matters of *tjukurrpa, inma* and *purnu*, terms which are used respectively for the sacred philosophy, the sacred ritual and the sacred (wooden) objects associated with the religious life of the initiated.

The *tjukurrpa* also covers the sacred mythology including the origins of the sacred places and the routes of the great creation beings, references to the petrified remains of the culture heroes and to their present existence above or below the night sky. These subjects tend to be strongly *watingkatja*; but certain aspects may also be *minymangkatja*.

UNIVERSE OF DISCOURSE AND THE ROLE OF THE OBSERVER

When an artist, as an artist, views the landscape, he notes forms and colours; he observes the direction of the light and the transitions between light and shade; he sees the positions of objects in relation to the horizon and to each other; he is concerned with perspective, masses, lines and composition. His vocabulary is specific for the discussion of these factors and for the tools and methods he will use to portray them.

The linguistic field worker, on the other hand, may tend to become more interested in collecting as much vocabulary as possible in a particular situation and may be tempted to press an Aboriginal helper to supply a multiplicity of labels to cover every conceivable item in the landscape stretched before them. The linguist, or any research worker for that matter, may tend to forget that the Aboriginal informant is likely to be viewing the scene through a cultural grid which is affected both by his "world view" and by the specific role he has adopted at the time.

The male hunter, as a hunter, will see the country before him as potential hunting ground. To discuss the features of the landscape he will use the vocabulary of the hunter. He will be concerned about the direction of the wind and the movement of leaves and bushes. He will be observing tracks on the ground and the flight of birds in the sky. He will be looking for indications of the presence of waterholes or patches of fresh water which may attract animal life. He will have a whole range of vocabulary to describe his hunting implements, their construction, their balance and their specific fitness for different types of hunting.

A woman, on the other hand, fulfilling the role of a food collector, will have a set of vocabulary which may be utilised to describe the grasses and other plants which yield food seed, edible berries and roots. She will have the technical vocabulary to describe food collecting methods, seed harvesting, flailing, winnowing, preparing and cooking. She will have names for her digging, flailing, grinding and winnowing implements and words to describe their use, their value, their construction and the processes associated with them. Her "universe of discourse" will include expressions describing the natural signs which indicate the presence of water, names for small edible animals and their habits, descriptions of ant-bed flailing grounds, and a host of other linguistic devices for warning, explaining, describing and teaching in connection with her role. Of course, she may be able to give quite a bit of information about the hunting activities of men; but she is more likely to suggest that if you require further information "ask a man".

The existence of technical jargons and role dialects in a society can be expected. In the Western Desert, for example, there are the special vocabularies of the song-writers and the stone flakers (which are not necessarily specialised roles in Western Desert culture). Mention has been made of the universes of discourse of the male hunter and the female food collector; but there is also "baby talk" and a special "in-law" speech. The latter is used during initiation ceremonies and when one addresses relatives belonging to certain "skin groups". Then there is the vast vocabulary, or one may call it "literature", associated with the secret and sacred traditions and rituals of the initiated. Coming under a different category are the very extensive vocabularies or terminologies pertaining to social organization, kinship and also the legal system.

In this paper we are more concerned with "world view" than "role view" although it has been necessary to clear the ground so that we can distinguish things which differ. We are now ready to press on and to ask the question, Are there taxonomic divisions which override role, sex, and age "views of nature"? In other words, How are plants and animals divided or categorised by all of the communities in the Western Desert in spite of the temporary roles and other differences of the individual speakers of the Western Desert language?

To answer this question involves two prior considerations. One of these is linguistic in nature, the other has to do with socio-religious organisation.

LINGUISTIC CATEGORIES AND THEIR RELATION TO "WORLD VIEW"

Without plunging into a discussion on the relationship between language and reality, and while recognising that there may be evidence for some reflection of the desert dwellers' world view in the contrastive sentence and verb structure of the indigenous language, I would suggest that there is no relationship between the word classes of the language and the indigenous categorisation of natural features.

Unlike the noun-classifying languages of the Kimberleys, where there may be some faint resemblance between the noun classed and the division of natural features, in the Desert the word classes are phonologically defined and do not reflect cultural norms.

Naturally, it is through language that the people are able the more clearly to reveal their "world view". Also, it is frequently through the subtlety of word choice that indigenous classifications of nature are brought to light. This fact will be illustrated later in the paper.

SOCIO-RELIGIOUS ORGANISATION AND THE CLASSIFICATION OF NATURE

Dr Kenneth Maddock (1971) discusses Radcliffe-Brown's hypotheses regarding the association of pairs of species with pairs of moieties and other examples of dualism in the organisation of society and associated dual classifying of selected species. He illustrates from Booandik of South Australia (pp. 103-104) and lists celestial objects, climatic items and living creatures under the matrimoieties, KUMITE and KROKE. He shows some of the problems presumably faced by the Booandik in carrying out classifications consistently. He then remarks (p.104), "The Booandik cannot have it both ways. Their principles of classification conflict in some instances". On the other hand, he allows for the rationality of Booandik classification of natural features.

In the Western Desert there is a significant socio-religious moiety-like division which separates father and son. For each individual, the whole community is divided into two "generation levels" termed *nganantarrka* and *inyurrpa* in one dialect. EGO belongs to *nganantarrka* (a word which probably comes from *nganarna-tarrka* 'our bone') and must not obtain a marriage partner from *inyurrpa*.

This two-fold division is significant in the initiation ceremony, but is not maintained in other ceremonies, according to Hansen (1974). In the *ulpurru* ceremony a related grouping operates.

The terms used are *tjirntungka* and *wiltjangka*, which may be translated 'sun side' and 'shade side' respectively.

Where the "skin-grouping" system operates, four sections or more superimpose on this basic division of society. Associated with the "skin-groups" are the related "skins" or totems in the animal world. In the Warburton Ranges area, these associated "skins" are *crow* and *eaglehawk* for one generation level, *galah* and *crested pigeon* for the other level. Thus,

Purungu section is likened to *kaarnka* the crow
Karimarra/Milangka subsections likened to *warlawurru* the eaglehawk
Panaka/Yiparrka subsections likened to *kinturrka* the galah
Tjarurru section is likened to yarralapulpa, crested pigeon.

Is the classification of nature generally based on these socio-religious divisions? In Aboriginal religion it is obvious that the link with nature is essential. The social divisions also have a religious sanction if not a total foundation in religious myths. Marriage, birth, death and burial customs are traced to religious (i.e., supernatural) origins and these have close ties with the land and natural objects or living creatures. Yet it appears that there are classifications of nature which are other than those which have become symbolic in religion and social organisation. The keen observation of nature on the part of the Desert nomads coupled with their pragmatic outlook has led to the formation of classifications of nature which may be regarded as (in our manner of talking) "more scientific than religious".

MODE OF EXISTENCE AND CLASSIFICATION OF NATURAL ENTITIES

In the more specifically practical divisions of nature, the Western Desert people show by the choice of verbs indicating the mode of existence of natural entities a basic classification which covers all discrete items of reality.

There are three verbs which are used to indicate existence, namely:

nyinanyi 'sitting' *ngarrinyi* 'lying' *ngaranyi* 'standing'

It will be valuable to give examples of how these three verbs are used to indicate existence or, to put it another way, how each one may function as the verb 'to be'.

wati tjurta ngurra nyarrangka nyinanyi. 'There are many men in that place.'

papa tjurta ngurra nyarrangka ngarrinyi. 'There are many dogs in that place.'
purnu tjurta ngurra nyarrangka ngaranyi. 'There are many trees in that place.'

No attempt has been made yet, as far as we know, to list extensively the items which occur with each of these verbs; but from observation and the quick reactions of Western Desert speakers when inappropriate forms are used, the following summary may be presented:

ngarrinyi 'lying' is used for objects which exist in a horizontal position
ngaranyi 'standing' is used for those which exist in a vertical position
nyinanyi 'sitting' is used to indicate the existence of human beings and certain other objects

Such a system may seem to suggest that a noun classification of the Northern type exists in the Western Desert; but if this is so it does not operate beyond the verbs "to be". As mentioned earlier, noun classes do exist in the Western Desert language but they are phonologically defined.

DICHOTOMY OF DIET

Food has always been a priority subject in the Western Desert. Foods are obtained from animal and plant life, and so it can be expected that animals and plants should be classified as to whether they are edible or not edible. As in English, there is no positive word for non-edible. All edible substances are divided into two major groups:

kuka: includes all flesh foods *mayi*: includes all vegetable foods

Included under the term *kuka* are all types of eggs. On the other hand, the various types of edible grubs (which are found in the roots or under the bark of trees and bushes) are classified as *mayi* (or its dialect variant *mirrka*). There are probably other arbitrary allocations of border-line items of diet.

Non-edible items are either *kuka-wiya* 'non-meat' or
mayi-wiya 'non-vege-food',
although a verbal compound can indicate 'not to be eaten'.

FURTHER CATEGORIES IN THE ANIMAL WORLD

Land animals are identified, primarily, by their tracks and then by their habitats. For example, the *marlu*, the red, plains kangaroo, has a long footprint; but the *kanyarla*, the euro or ranges wallaroo, has a shorter footprint.

The tracks of animals and birds are memorised from childhood and can be reproduced in the sand by deft hand impressions. The type of hand movements required to simulate the footprints in the sand may prove to be a prime factor in the categorisation of animal and bird species. The long foot marks of the kangaroo are made with the side of the hand; claw marks are made with the fingernails; small pad marks are made with the bottom corner of the hand (opposite the thumb) or with the knuckles, according to size of tracks.

Footprints could easily distinguish between land animals and birds, and would divide animals into those habitually locomoting on two feet, four feet (i.e., two hands and two feet according to Western Desert outlook), or by a serpentine movement.

Apart from distinguishing snakes as to whether they are edible or not edible, the desert people generally classify snakes as -

eirru: a term covering all venomous snake types
kuniya: for the non-venomous types, such as the carpet snake
warnampi: for all water snakes

There are dialect variants for these terms. Specific names, also, are given to significant individual types, such as the rock python and those which are especially good for eating.

Crawling insects and spiders (the latter being mainly the trapdoor type in sandy country) may be identified by their tracks also.

Major divisions of insects include the following:

pinta-pinta: all moths and butterflies.
warnka: creatures which make webs or silken bags - including spiders and processionary caterpillars.
minya: for all black ants.
pula: for termites.
tjintilyka: for grasshopper-like insects.
tjirtu: for flea-like creatures including the tiny insects which swim about in waterholes.

nirri-nirri: covers all types of beetles.
muungu: is the general term for flies, but *kartilyka* denotes those flies which are notorious for depositing their larvae in meat.

It is recognised that the use of generic terms for (say) ants, then different names for other members of the ant family (e.g., honey ant, bullant, etc.) does not mean that Aboriginals have recognised a family and different species within the family. They do not necessarily relate these specimens. On the other hand, it is known that generic terms do indeed cover a large number of insects; but those members of the category thus named which have special significance (because of their association with certain sites, environments, or with sacred mythology) have distinct names allotted to them.

Environment types recognised in the classification of living creatures are three, namely:

yilkaringkatja: pertaining to the open sky
kapingkatja: pertaining to water
parnangkatja: pertaining to the earth/ground

The latter may be divided into three further subdivisions:

yapungkatja: pertaining to rocky or range country
pilangkatja: pertaining to spinifex plain country
talingkatja: pertaining to sandhill country

Supernatural beings are associated with the night sky and may be classed as:

munga kaninytjarratja: pertaining to the underside of the night sky
munga katungkatja: pertaining to the topside of the night sky.
The night sky is regarded as a black, spirit stuff called *munga*.

INORGANIC MATTER AND THE COLOUR RANGE

While there are specific names for small stones, boulders and mountain ranges; also for rocky hills and outcrops, flint stones, flint knives, grindstones and money, yet all of these may come under the general heading of *yapu*, which may be translated 'rock', 'solid mineral'. All solid minerals, precious and semi-precious gem stones, and similar substances, come under this generic term as well, although, when associated with the sacred beings and their routes, some of these substances may be regarded as the pertified remains of blood, faeces, vomit, semen, whole- or part-bodies of "dream-time" beings.

All pigments, whether obtained from sedimentary rock or clay or from charcoal or other vegetable sources, come under the general name of *walka*. This is also the word for 'colour', 'paint' and the finished painting.

Pigments which are used for body painting and for painting on objects and on cave walls are very limited in the desert areas. They include:

purrku:(and a number of dialect variants) 'charcoal'
kunarnpa: 'white pipe clay' *kaltji*: 'yellow ochre'
karrku: 'red ochre' *yirrami*: 'blood'

There are many dialect variants of these words.

If need be, the Desert people can describe practically any colour of the spectrum. As well as the pigments' names, which also function for the colours they produce, there are other specific colour words:

maru: 'black' *pirntalpa*: 'white', 'shiny'

Then there are compounds which produce colour adjectives from the nouns which symbolise natural objects having the colours described:

warrkini-warrkini: 'green' (from *warrkini* 'grass')
yirrami-yirrami: 'blood red', 'red' (from *yirrami* 'blood')

Other colours are represented in similes:

e.g., *walka yilkari pirinypa* (Lit. 'colour sky like') 'sky blue'.

SUMMARY

There are hints that folk taxonomies exist in Australian Aboriginal cultures. More exhaustive studies are needed.

Tension, discrepancy in detail, deadlocks and other unusual reactions from indigenous speakers may give clues to incongruity of overlap between the cultural system of the investigator and that of the native speaker.

Such reactions may be the result of restrictions on discussion of topic or breaches of custom. Determining the reason for such reactions may be the important step towards unravelling previously undisclosed systems.

Linguistic and socio-religious criteria have been suggested as relevant in Aboriginal taxonomies. These prove to have a certain significance in the Western Desert; but the pragmatic outlook of the Aboriginals and their keen observation have led them to produce what may be termed "scientific" as well as religious and social categories.

Classifications have been found based on MODE OF EXISTENCE and FOOD VALUE and FOOD TYPE. Also, while specific names are given to hundreds of plants, animals and birds, these may come under generic terms and may also be categorised according to their tracks and their habitats.

Insects also have major classifications. There are also generic terms for minerals and for colours with the possibility for the supply of names or terms for almost any gradation of colour needing to be described.

Reference has not been made to a number of areas of interest. For example, it is possible that there is a hierarchy of body parts in the Western Desert. There are also divisions of time, of the starry heavens, and of the land, which differ in a number of respects from the systems which have developed in Western culture. It is hoped that sufficient has been written in this paper to stimulate further and more exhaustive and accurate study in this field of Australian Aboriginal taxonomic systems.

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BIBLIOGRAPHY

Brandenstein, C.G. von. The Meaning of Section and Section Names, in *Oceania*, Vol. XLI, No. 1, Sept. 1970, University of Sydney.

The Symbolism of the North-Western Australian Zigzag Design, in *Oceania*, Vol. XLII, No. 3, March 1972.

The Phoenix "Totemism", in *Anthropos*, Vol. 67, 1972, Switzerland. pp. 586-594.

Conklin, Harold. Hanunoo Color Categories, in D. Hymes (Ed.), *Language in Culture and Society*, Harper and Row, N.Y. 1964.

Douglas, W.H. An Introduction to the Western Desert Language, *Oceania Linguistic Monographs*, No. 4 (revised), The University of Sydney, 1964, esp. pp.126-127.

Frake, C.O. Diagnosis of Disease Among the Subanun, in D. Hymes (Ed.), *Language in Culture and Society*, Harper and Row, N.Y., 1964.

Franklin, Karl. Kewa Ethnolinguistic Concepts of Body Parts, *Southwestern Journal of Anthropology*, (Albuquerque: University of New Mexico and Laboratory of Anthropology, Santa Fe) 19:54-63 (1963).

Gumperz, J.J. and Dell Hymes (Eds.) The Ethnography of Communication. *American Anthropologist Special Publication*, Vol. 66, No. 6, 1964. See relevant comments in Introduction by Dell Hymes.

Lenneberg, Eric H. and Roberts, John M. The Language of Experience - A study in methodology. *Supplement to International Journal of American Linguistics*, Vol. 22, No. 2, April 1956. Waverley Press Inc. Baltimore.

Lounsbury, F. A Semantic Analysis of the Pawnee Kinship Usage. *Language*, Vol. 32, 1956.

Structural Analysis of Kinship Semantics, in H.G. Lunt (Ed.), *Proceedings of the Ninth International Congress of Linguists*. Cambridge, Mass. 1962.

Maddock, Kenneth J. *The Australian Aborigines - A portrait of their society*, (London) Allen Lane, The Penguin Press, (1971).

McKaughan, Howard P. Maranao Plant Names, in *Oceanic Linguistics*, Vol. IV, Nos. 1 & 2, 1965, pp.48-49. University of Hawaii.

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