6. On binary categories and primary symbols

Introduction

Structural analysis has, in its development, relied exceptionally on the use of dual categories or binary oppositions. Although forms of binary analysis can be traced to Vico in the eighteenth century or to Bachofen in the nineteenth century, it is often argued that some vague analogy with the workings of the computer is primarily responsible for the recent impetus given these studies. Yet despite a vogue that this analogy may have created, binary analysis has its clearer basis in the program for structural linguistics that emanated from Prague in the 1920s, and, although possibly derivative, in the literary studies of Indonesian social structure and mythology developed independently by Leiden anthropologists working in the 1930s. These two ‘schools’—Prague and Leiden—have been the chief inspiration for the two varying modes of binary analysis that have been advanced in social anthropology: Claude Levi-Strauss’s grand disquisitions on the nature of myth and Rodney Needham’s precise two-column analyses of social and symbolic systems. Both contend that their analyses, in some way, tap certain fundamental features of the human mind.

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1 This chapter first appeared in 1975 in Roy Willis (ed.), The Interpretation of Symbolism, ASA Studies Vol. 3, Malaby Press, London. The research on which the original paper was based was originally supported by a US Public Health Service fellowship (MH-23, 148) and grant (MH-10, 161) from the National Institute of Mental Health (NIMH) and was conducted in 1965–66 in Indonesia under the auspices of the Lemabaga Ilmu Pengetahuan Indonesia (LIPI). The continuation of this research was again supported by a NIMH grant (MH-20, 659) and carried out in 1972–73 under the joint sponsorship of LIPI and the University Nusa Cendana in Kupang, Timor. The paper was a product of two specific influences: discussions with Rodney Needham in Oxford in the summer of 1963 as I was preparing for fieldwork on Rote, and later discussions at Harvard with Roman Jakobson after I had returned from Rote and had begun the analysis of the island’s ritual system. To both of these scholars, I acknowledge my personal indebtedness. In preparing the final draft of the paper, I benefited from the assistance and comments of Steve Fjellman, Paul Friedrich, David Maybury-Lewis, Rodney Needham, Donald Olivier, David Schneider, John Sodergren and John Whiting. I regret that fieldwork commitments in eastern Indonesia kept me from attending the ASA Decennial Conference for which the original paper was prepared and submitted.

2 When I first published this paper, I included the following quotation from Roland Barthes as a preface to my discussion: ‘it is possible to imagine a purely formal lexicon which would provide, instead of the meaning of each word, the set of other words which catalyse it according to possibilities which are of course variable’ (Barthes 1967:70). This remark by Barthes offers an image of a formal lexicon whose lexical elements are linked to one another. Something of this sort is an ambition worth considering and is one on which I have embarked. Barthes continues with the added observation that the ‘smallest degree of probability would correspond to a “poetic” zone of speech’ and then quotes Valle Inclan: ‘Woe betide him who does not have the courage to join two words which have never been united.’ This conception of poetry as implying undaunted freedom of composition is radically unlike traditions of formulaic oral poetry. Whereas one can imagine a formal lexicon of the sort that Barthes describes and, in fact, begin to construct one, it is my intention in this chapter to indicate that, in the case of this oral poetry, the poetic zone corresponds with the highest, not the smallest, degree of probability.

3 Edmund Leach (1969) has called attention to this aspect of Vico.
Critics of these methods have not infrequently expressed puzzlement in attempting to disengage either mode of analysis from that which, it is argued, is supposed to be inherent in the materials analysed. More searchingly, however, it has been countered that whether or not one accepts the validity of binary categories, the same set of oppositions—male/female, right/left, raw/cooked, Heaven/Earth—recur with such monotonous frequency that they can hardly be expected to provide fresh insights into the ethnographic diversity that anthropologists study.

Those interested in reaching some deeper level of symbolic phenomena regard structural analysis as a poor resort for the problems they face. Thus, although the issue involves scholars of a whole range of differing opinions, it seems, at times, to divide those interested in the discovery of what is deemed to be a limited set of universals or near-universals in human cultures from those who feel themselves committed to the arduous task of recording the contextual richness of these same cultures. More frequently, binary analysis, whether regarded as interesting or trivial, has tended to be accepted with some reservation. Paul Friedrich aptly stated this position:

> The so-called ‘principle of binariness’, again in phonology and lexicology, may be categorically assumed or carefully guarded and qualified, but most scholars agree that in some form it is a major factor in empirical systems...and that it is often fruitful to assume that it is such a factor. (Friedrich 1975:199-200)

This chapter is intended to consider certain aspects of the use of binary categories. I take, as a starting point, the ‘principle of binariness’, but my concern is to derive from it a means of going beyond this simple recognition towards a more systematic exploration of the complex use of these categories. In this chapter, I attempt to set forth the initial methods and preliminary results of an analysis of the ritual system of a single society, that of the island of Rote in eastern Indonesia. To generalise, however, from the symbolic system of one of the smaller islands of Indonesia to those of other cultures requires considerable justification. It is, therefore, necessary initially to focus attention on the widespread linguistic phenomenon of parallelism on which my methods of analysis are founded. It is this phenomenon that offers a possibility for the formal comparison of symbol systems.

4 The first draft of this analysis was written in Kupang on Timor in 1973 during a respite from fieldwork on the island of Rote. During my stay on the island, I was able to more than double the textual basis for my analysis of the Rotenese ritual system and was, for the first time, invited to perform, with other chanters, a major ritual—in this instance, the final mortuary ceremony for my close friend and instructor in ritual language, the eminent chanter and ‘Head of the Earth’ in Termanu, S. Adulanu. This analysis is thus based on a combination of fieldwork and close textual analysis of ritual-language materials I have gathered during my fieldwork on the island.
The phenomena of semantic parallelism

The term ‘parallelism’ derives from the researches of Bishop Robert Lowth, who, in the eighteenth century, made the discovery that one of the major principles of composition throughout the Old Testament was a carefully contrived pairing of line, phrase and verse. For this phenomenon, Lowth coined the phrase *parallelismus membrorum*. Since Lowth’s time, Biblical scholarship has continued to investigate this phenomenon and has shown that Hebrew oral poetry shared, with Ugaritic and Canaanite traditions, a standardised body of conventionally fixed word pairs (cf. Newman and Popper 1918–23; Gevirtz 1963). It is the required pairing of set terms, according to the canons of the oral tradition, that gives rise to the careful balance of phrase and verse. Modern translations of the Bible often make clearer this parallelism than do the older translations more familiar in English traditions. The prophetic lines of Isaiah (2:2–5) provide an appropriate illustration of this Biblical parallelism:

In days to come,

The mountain of the Lord’s house

Shall be established as the highest mountain

And raised above the hills.

All nations shall stream toward it,

Many peoples shall come and say:

‘Come, let us climb the Lord’s mountain,

To the house of the God of Jacob,

That He may instruct us in His ways,

And we may walk in His paths.’

For from Zion shall go forth instruction

And the word of the Lord from Jerusalem.

He shall judge between nations

And impose terms on many peoples.

They shall beat their swords into ploughshares

And their spears into pruning hooks;

One nation shall not raise the sword against another
Nor shall they train for war again.

O house of Jacob, come,

Let us walk in the light of the Lord!

In these lines, the sets nations//peoples, ways//paths, word//instruction, Zion//Jerusalem, swords//spears give a translated approximation of the word pairs of the original tradition.

The significance of Lowth’s researches began to reach well beyond the field of Hebraic studies when it was discovered, at first chiefly by missionary Bible translators, that in many cultures there existed similar traditions of parallelism (cf. van der Veen 1952; Onvlee 1953). There has also gradually accumulated a considerable body of independently motivated research to indicate that parallelism, as a linguistic phenomenon, is of general occurrence among the world’s oral literatures. Studies and translations have documented traditions of parallelism in ancient Semitic languages, ancient Egyptian, Chinese, Japanese and early Greek, as well as numerous ‘folk’ traditions found throughout southern India and most of South-East Asia, in Austronesian languages from Madagascar to Hawai‘i, in the various oral literatures of the Ural-Altaic area, in Turkic Mongolian languages, and among American Indian languages, particularly in Middle America, where these traditions reached a flowering in ancient Mayan and Aztec literature.\(^5\)

Thus Isaiah, the *Popul Vuh*, ancient Chinese festival songs, Kachin *Nat* verse and Hawaiian origin chants reflect similar principles in their composition.\(^6\) On this basis, it may not ultimately seem surprising that structural analyses of episodes from Genesis, or of the mythology of Borneo or of highland Burma, or even a portion of American Indian myths, should yield a rich array of binary oppositions, since this may—directly or indirectly—have been their composing principle. Conversely, it would suggest that a comprehending analysis of these forms of elaborate dualism ought to examine this underlying principle of composition.

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5 Initial bibliographic sources on parallelism can be found in Jakobson (1966) and Fox (Chapter 2, in this volume).

6 I am indebted to a number of scholars who have responded to my first survey of the literature on parallelism (1971) by referring me to further sources: 1) Professor F. Lehman, who has informed me of his own researches on parallelism in Burmese; 2) Professor M. Edmonson, who completed a new verse translation of the *Popul Vuh* (1971); 3) Professor E. Leach, who has referred me to the introduction to the first edition of Hanson’s *A Dictionary of the Kachin Language* (1906); 4) Professor P. Voorhoeve, who has directed me to Kern’s *Commentaar op de Salasilah van Koetal* (1956); 5) Professor K. Hale, who has written on a Walbiri tradition of antonymy (1971); 6) Professor G. Sankoff, who has been studying the use of lexical pairs in Buang poetry from New Guinea; and 7) Professor W. Davenport, who has referred me to *The Kumulipo* (Beckwith 1951) of the Hawaiians.
On addressing the ‘text’: A Rotenese myth of culture

Of importance to this discussion is the selection of a ‘text’. The problem is somewhat analogous to the one a Rotenese chanter faces in preparation for a performance. The choice of a text is by no means a matter of unrestricted selection. There exists, for major rituals, a recognised repertoire of named chants: chants that each purport, by means of an idealised narrative structure, to ‘explain’, ‘typify’ or ‘comment’ on a ritual situation (cf. Fox 1971:221). These chants resemble the lakon of the Javanese wajang tradition. Each is a self-contained episode in what appears to have been an epic drama. Close scrutiny of the genealogies that accompany the chants and identify their principal characters provides glimpses of the possible outlines of this epic, but among individual chanters and in the different dialect areas of the island there is a wide variation in the narrative structure of similarly named chants. Nineteenth-century references to bands of wandering poets (Heijmering 1843:356–7), who would appear wherever major rituals were to be performed, suggest that the tradition may once have been more coherent than it is now. For the present, no Rotenese has attempted the Homeric task of resynthesising the island’s epic.

For a chanter, therefore, there exists a loose canon of relevant texts. From this canon, he is permitted freedom to adopt, adapt and embellish, within certain limits, the narrative structure that best fits the ritual occasion. Judgments on his chosen text are made in terms of its ‘appropriateness’ to the situation rather than in terms of some unalterable, abstract standard.

In a similar vein, I have chosen to summarise here a particular Rotenese ritual chant in strict parallelism. It is especially appropriate to a discussion of issues that this entails, it is best to provide examples. In 1966, two chanters alternated in leading the chorus of the funeral dance for a young, unmarried noble girl in Termanu. Both chanters chose as their text the chant Meda Manu ma Lilo Losi, but each, as the evening progressed, developed his own separate version in distinctive ways. Later, I had the chance to ask one chanter about his intentions in the performance. Meda Manu ma Lilo Losi, he explained, was the appropriate text for a virginal girl who died ‘unripe’. The chant, however, contains no reference to a noble origin, implying in effect that the girl is a commoner. In this situation, the text was not entirely appropriate so what he did was to make Meda Manu and Lilo Losi (chants are usually named after their chief characters) into a noble character. Some time before this funeral, an important male elder of this same noble lineage died. The leading elder of the royal lineage of Termanu, the foremost chanter in the domain at this time, came to honour the deceased. The lineage of the dead man originated as a client line of the royal lineage and as it prospered had given to the royal line a succession of enormous bride-wealth payments to establish its independence and near equality of rank. The text chosen by this royal chanter was Ndi Loniama ma Laki Elokama, a chant appropriate for someone who died with great wealth. It is among the most interesting of all Rotenese chants in that it praises the proper use of wealth, honouring the deceased for his generosity and his ability to attract a loyal following. What is more, it places in the mouth of the dying man an admonition to his descendants and heirs to act as he has in life (see Chapter 12). The narrative of the text, however, makes no reference to nobility and the royal chanter in performing added none. Although this could have been taken as a studied insult, it was regarded as appropriate between equals, the royal chanter’s presence being sufficient to signify his good intentions.
in structuralism and symbolic analysis because its subject matter appears to be another transformation of the ‘mythologic’ traditions broached by Lévi-Strauss in *Le Cru et le Cuit* (1964). The chant tells of the hunting of wild pig, of the origin of fire and of cooking and of the obtainment, by exchange, of the material implements of culture. It plays, at times subtly, at times openly, on the connotations of taste and the metaphorical equation of sexual intercourse and eating. And it goes on to explain the breach in the alliance that once ordered the primal powers of the world.

Properly speaking, this chant ought to be designated as the ‘myth of the house’. Its chanting is reserved for the ceremonial consecration of a traditional dwelling. Those chanters who have recited this myth for me, and those who have declined to do so, agree in regarding it as the most ‘heated’ segment of Rotenese esoteric knowledge. It is the only chant, to my knowledge, that is intentionally distorted at its crucial juncture; in this case, to veil the sacrifice that creates the house. Rather than adapt and embellish this chant as a chanter might, I intend instead to excerpt from and alternate between three separate versions of this chant from the domain of Termanu. Together, these versions comprise 677 lines of verse, which makes summary in this context a necessity. My intention is not to do a ‘structural analysis’, whatever that might entail, but to address these texts as a prelude to a discussion of their underlying symbolic structure.

The Rotenese epic involves the deeds of two opposing families: the descendants of the Sun and Moon (*Ledo do Bulan*) and the descendants of the Lords of the Sea and Ocean (*Liun do Sain*). Many of these deeds occur on Earth and directly involve men on Earth. What gives the epic its social underpinning are claims by various lineages on Rote to direct descent from or ancestral association with figures in the chants. Most of the nobility of Rote, for example, claim descent, by separate lines, from the nine sons of the Moon, while other clan groups identify themselves with ancestors who allied themselves with the Lords of the Sea. Since both families intermarry in the epic, a putative link to one implies a relationship with the other. The significance of this present chant is that it describes the first encounter of these two families—their mutual discovery and its consequences. The setting for the chant is the Earth.

The sons of Sun and Moon, Patola Bulan and Mandeti Ledo, descend to Earth, whistle for their dogs, Pia Dola and Hua Lae, and set out to hunt.

*Ala sopu lai basa dae*  
*Ala fule lai basa oe.*  
*Leu Ledo lasi nana-papadak*

They hunt throughout the land  
They track throughout the waters.  
They enter the Sun’s forbidden forest

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8 Complete translations can be found in Fox (1972: I, 98–109; II, 1110–20; III, 156–71). Version one is by the very capable chanter P. Malesi; version two by the chantress L. Keluanan; version three by the former Head of the Earth, S. Adulanu.
Ma Bulan nula nana-babatak  
And the Moon’s restricted wood

Malala meo dei pana-foe  
And catch a pied-nosed cat

Ma kue dei iko-fula,  
And a white-tailed civet,

Bulan kue nasa-mao  
The Moon’s fond civet

Ma Ledo meo naka-boi-na.  
And the Sun’s tame cat.

Immediately, the Sun and Moon inform them of their error and assign them new regions in which to hunt. The hunt resumes but is unsuccessful.

Asu-la ta fue  
The dogs corner nothing

Ma busa-la ta eko.  
And the hounds encircle nothing.

They continue to where the land borders the sea and suddenly they encounter the Chief Hunter of the Ocean and the Great Lord of the Sea, Danga Lena Liun and Mane Tua Sain, who have come from the ocean depths with their dogs, Masi Tasi and Deta Dosa. It is essential to an understanding of this and subsequent passages to realise that Rotenese traditions personify the Lords of the Sea as Shark and Crocodile. These creatures can assume glistening human forms when they come up on land. The hunters agree to combine their efforts, as version two makes clear:

Boe ma busa-la laka-bua  
The dogs form a pack

Ma asu-la la-esa.  
And the hounds join as one.

De ala fule kue  
They track civet

Ma ala sopu bafi.  
And they hunt pig.

De leo nula Kai Tio dale  
Deep in the woods of Kai Tio

Ma lasi Lolo Batu dale  
And deep in the forest of Lolo Batu

Boe ma asu-la fua  
The dogs corner their prey

Ma busa-la use.  
And the hounds give chase.

Here, the hunters catch and kill the pair pig and civet, rather than the forbidden pair, cat and civet. What then follows is an exchange of invitations and a debate about whether to ascend to the heavens or to descend to the sea depths to eat the sacrifice of pig and civet. In the end, it is decided to descend into the sea, where the sons of Sun and Moon discover for the first time the taste of cooked food. Again, the language of version two is clearer:

De leu, de ala fati bafi  
They go and they eat the offering of pig

Ma fina kue.  
And partake of the sacrifice of civet.

De ala tunu hai bei masu  
They roast on a smoking fire

Ma ala nasu oek bei lume  
They cook in boiling water

Nai lo heu hai ikon  
In a house roofed with ray-fish tails

Ma nai uma sini kea louk.  
And in a home decked with turtle shells.
Patola Bulan and Mandeti Ledo secrete a leaf full of this cooked food and carry it off to the Sun and Moon, Bula Kai and Ledo Holo, who, on tasting this morsel, exclaim:

‘Ladak ia mai be
Ma lolek ia nai be?’

‘From where is this taste
And where is this goodness?’

And they are told:

‘Ladak ia nai liun
Ma lolek ia nai sain.’

‘This taste is in the ocean
And this goodness in the sea.’

Whereupon, in version one, the Lords of the Sea request the daughters of the Sun and Moon; in version two, Sun and Moon propose the marriage of their daughters. These daughters, Fuda Kea Ledo and Tao Senge Bulan, are, however, already married. They must first be divorced before they can be remarried to the Lords of the Sea. Then begins one of the most significant passages in the chant, a passage that is virtually identical in all the versions I have recorded. The Sun and Moon begin to demand bride-wealth payments:

**Boe ala doko-doe fae-tena**
*They demand a payment of livestock*

**Ma ala tai-boni belli-batum.**
*And they claim a bride-wealth of gold.*

**De ala fe lilo ma-langa menge**
*They give gold chains with snakes’ heads*

**Ma ala fe kapa ma-ao foek.**
*And they give buffalo with crocodile-marked bodies.*

**Te ala bei doko-doe**
*But still they continue to demand*

**Ma ala bei tai-boni.**
*And still they continue to claim.*

**Besak-ka ala fe bo pa’a-bela**
*Now they give the bore tool and flat chisel*

**Ma ala fe taka tala-la.**
*And they give the axe and the adze.*

**Ala fe sipa aba-do**
*They give the plumbline marker*

**Ma ala fe funu ma-leo.**
*And they give the turning drill.*

**Te hu ala bei doko-doe**
*But they still continue to demand*

**Ma ala bei tai boni.**
*And still they continue to claim.*

**Boe-ma ala fe nesu maka-boka buik**
*Then they give the mortar whose thudding shakes its base*

**Ma alu mata-fia tongok.**
*And the pestle whose thrust blisters the hand.*

**Te ala bei tai-boni.**
*And still they continue to claim.*

**Besak-ka ala fe kutu-ana naü-poin**
*Then they give the little flint-set with loose tinder grass*

**Ma una-ana ai-nggeo.**
*And the little black-sticked fire drill.*

**Besak-ka ala lae:**
*Now they say:*

‘Dai te ta dai
O nai ta dai liman
Ma nou te ta nou’

‘Whether enough or not enough
What’s in our grip is enough in our hand
And whether sufficient or insufficient’
With minor variations and the change of a few names, versions one and two of this chant are remarkably similar. There exists, however, a third version that offers a significantly different interpretation, developing more explicitly, through its play on words, the connection between the eating of cooked food and marriage. Version three follows version two to the point where the hunters enter the sea with the catch of pig and civet and then focuses on the lighting of the cooking fire:

- **Boe ma ala diu besi no batu**: They strike iron on stone
- **Ma ala una ai no ai.**: And they rub stick on stick.
- **De ala tao kutu na’u poi**: They work the tinder-top flint-set
- **Ma tao una ai nggeo.**: And work the black-stick fire-drill.
- **Boe ala pila null neu bafi**: And they burn and roast the pig
- **Ma ala masu ndalu neu kue.**: And they smoke and fire the civet.

At this point, the sisters of the Lords of the Sea appear. They are Lole Liuk and Lada Saik—literally ‘Ocean Goodness and Sea Tastiness’. Immediately, the chant begins its verbal allusions. Now that the pig and civet have been roasted, the Lords of the Sea ask their sister:

- **‘Te bafi sao no bek****: ‘With what do you marry pig
- **Ma kue tu no hata?’**: And with what do you wed civet?’
- **Boe te inak-ka Lada Saik**: The woman Lada Saik
- **Ma fetok-ka Lole Liuk nafada nae**: And the girl Lole Liuk speaks, saying:
- **‘Te dengu doli no bafi****: ‘Stamp rice with pig
- **Ma tutu lutu no kue.**': And pound millet with civet.’

Native exegesis on these lines directly identifies the verb *sao* (‘to marry’) with the verb *na’a* (‘to eat’).

The feast proceeds and, at its conclusion, the Lords of the Sea themselves suggest that the sons of Sun and Moon take food to the heavens. On their return journey, they discover the sweet–sour taste of lontar-palm juice, a staple Rotenese food. They remark:

- **‘Seok-ka sain liun lalun-na malada-hik:** ‘Indeed the sea-ocean’s beer is tasty:
- **Kei-kei ma keke’e.**: Sweet and sour.
- **Bulan no Ledo lalun-na so**: While the Moon and Sun’s beer is
- **Na namis ma makale’ek-ka.’**: Insipid and tart.’
Along with cooked food, therefore, the sons of Sun and Moon return to the heavens with sweet–sour lontar juice. On tasting this food, the Sun and Moon’s first response is to wage war on the sea to obtain more:

‘Malole ata lea tafa neu sain
Ma loe dongi neu liun.’

‘It would be good to extend a sword to the sea
And lower a barbed spear to the ocean.’

The sons reject this proposal as impossible and, instead, propose that they marry the women ‘Ocean Goodness and Sea Tastiness’. Sun and Moon react to this by warning their sons that they ought not to attempt to supersede their elders. So Sun and Moon themselves marry the sisters of the Lords of the Sea. This version of the chant thus reverses the relations of the two powers: instead of being wife-giver, the heavens become wife-taker from the sea. In the chant, bride-wealth is left unmentioned while all the cultural goods named as bride-wealth in the other versions are brought by ‘Ocean Goodness and Sea Tastiness’ as part of their dowry. The same end is achieved but by altering marriage relations.

With the acquisition of tools from the sea, Sun and Moon order the construction of their house. Chanters regard this as the most critical segment of the narrative and those who have recited it for me admit to obscurity at this point. Version two is the clearest.

The trees whose wood is required for the house are the ‘two-leaved keka tree’ (*Ficus* spp.) and ‘three-leaved fuliha’a tree’ (*Vitex* spp.). These are to be made into the *toa*-poles and *sema*-beams—the ridgepoles and support beams of the house. Various builders are called to work on the house but they are unable to erect the main beams. The chant explains:

*Te laka-ndolu nai lain*
*Na ana kekeak leo dae mai.*
*Ma laka-ndolu nai dulu*
*Na lai leo muli neu.*
*Te laka-ndolu nai muli*
*Na soko leo dulu.*

When they work above
It tilts towards the ground.
When they work on the east
It leans to the west.
But when they work on the west
It slants to the east.

The secret of the chant is that the house requires a model for the layout of its beams and poles. Shark and Crocodile, the Lords of the Sea, the original benefactors of the Sun and Moon, are invited from the ocean, killed and their skeletal structures used as a model. The structure of the Rotenese house is thus that of a crocodile, with its head in the east and tail in the west, and its rib cage forming the sloping roof beams. (More than once, some old Rotenese, in the heat of explanation, has bent down on all fours to demonstrate this outstretched layout of the house.) Version two describes this:
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Touk Danga Lena Liun
Ma ta’ek Man’ Tua Sain
Ala taon neu uma di’i
Ma ala taon neu eda ai.
Besak-ka kalu kapa ledo ha’an
Ma dui manu au te’e-na
Ala tao[n] neu sema teluk
Ma taon neu toa duak.

The man Danga Lena Liun
And the boy Man’ Tua Sain
They make him into the house posts
And they make him into the ladder tree.
Now the sun heats his ‘buffalo sinews’
And the dew moistens his ‘chicken bones’.
They make him into the two sema-beams
And make him into the two toa-poles.

Note: ‘Buffalo sinews/chicken bones’ (kalu kapa//dui manu) is the standard formula in all rituals for bones disinterred from fles.

Finally, the true master-builders arrive, a species of spider and a giant stick insect.9 Laying out the dried bones of the shark and crocodile, they build the house.

Besak-ka Did Bulan mai
Ma Bolau Ledo mai.
De lae: ‘Deta ape.
De deta ape neu be
Fo lolo neu ndia.’
Boe te Bolau lolo ape neu be
Na ala solu limak neu ndia
Ma Didi deta ape neu be
Na ala fua lolo neu ndia.
Besak-ka sema teluk-kala dadi
Ma toa duak-kala tola.
Besak-ka ala soe sike ikon
Ma tati solo-bana langan.

Now Moon Stick Insect arrives
And Sun Spider arrives.
There say: ‘Dip spittle.
Where the spittle is dipped
There lay the planks.’
So wherever Spider lays spittle
There they then rest the arms
And wherever Stick Insect dips spittle
There they then place the legs.
Now the three sema-beams are made
And the two toa-poles appear
They incise a tail design
And they cut a head pattern.

And, as version one concludes:

De kue lu’u nai ikon
De fani tai nai langan.
A civet crouches at the tail
Bees nest at the head.

This, I submit, is the kind of myth that structural analysis was developed to elucidate. Similar myths have been searchingly scrutinised. It offers literally

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9 The didi (reduplication of di: ‘pole’) is a species of giant stick insect of the order/suborder Phasmida. These insects are at least 20–25 cm long and resemble a mantis in form. They become active only at night and are especially visible in the light of the full moon, hence their association with the moon. The set ‘spider//stick insect’ (bolau/didi) is illustrative of the translation problems one encounters in dealing with ritual language.

On my first field trip, I never saw a didi and when I asked what this word referred to, I was told by several informants that the didi was an insect, ‘like the spider’. One night on my second fieldtrip, I discovered the didi was really a stick insect: its being ‘like a spider’ had nothing to do with its shape or appearance, but only its co-occurrence in the same set.
hundreds of binary oppositions to tantalise the analyst and develops a major South-East Asian mythic motif: a primal alliance whose inevitable, creative rupture establishes disorder and imbalance in the world. The myth is intimately connected, as well, with other Rotenese myths that recount the various causes of enmity between men and the Lords of the Sea: how, for example, the shark and crocodile, after forcibly marrying women on Earth, are ambushed as they return to the sea, and their body parts—blood and guts—are strewn out and then copied to become the motifs for Rotenese cloths. The very conventions of the tradition, the use of doubled names and the common (though not always consistent) stylistic alternation of singular and plural forms defy simple, straightforward translation and contribute syntactically to the overriding duality of composition.

The myth is also replete with seemingly minor details for which native exegesis provides no hint: the ‘civet cat’, for example, occurs first as a pair with ‘cat’, whose hunting is forbidden, then with ‘pig’, whose flesh may be eaten, and finally with ‘bees’, domesticated as a design carved on the ridgepole of the house. Since this myth is a detailed charter, there is a question of how much ‘extra’ information is needed to inform its analysis. Furthermore, there is the additional problem of the various versions. Version three is a radical departure from versions one and two and it completely avoids mentioning the sacrifice of Shark and Crocodile. When confronted with these alternative interpretations, however, Rotenese with whom I have discussed these matters do not seem disconcerted. Each chanter has his opinion and obviously any of the versions would be adequate for the performance of the consecration of a house. Significance does not seem to reside wholly or even primarily at the message level of the narrative structure.

Considerations of this sort are what lead one to question the usefulness of any single myth analysis or series of analyses. If one takes as axiomatic that myths and their symbols are meaningful as part of a whole, it would seem that any single myth or group of myths is too inadequate and truncated a cultural production to be acceptable on its own. What ought to be a goal of analysis is something far more systematic, and yet at the same time, as has been argued, some principle or set of principles that orders the system.

Ritual language as a cultural code

Among linguists, Professor Roman Jakobson has most frequently drawn attention to the phenomenon of parallelism, noting its ‘pervasive’ and ‘compulsory’ qualities and arguing that the existence of a thoroughgoing canonical parallelism provides objective criteria for the study of native correspondences (Jakobson and
Halle 1956:77). A dyadic language of the kind used by Rotenese in their rituals is a formal code comprising the culture’s stock of significant binary relations. It is a complex code, not arbitrarily restricted to a particular ‘domain’ of natural language and it is relatively stable. In appearance, the code gives indication of being an open-ended, focused system of semantic interconnections—what linguists since Trier have designated a semantic field. Furthermore, it is capable of formal study, since it is itself a formal system.

To utilise the terminology I have adopted for the analysis of Rotenese ritual language (Fox 1971, 1974), each dual category or binary opposition is a dyadic set. As such, each dyadic set is a unique semantic grouping that brings into conjunction two separate elements, thereby ‘affecting’ their individual significance. What is more, an element that forms part of a dyadic set may pair with other elements to create new dyadic sets. Whereas these binary categories can be considered as ordered pairs, they are not exclusive pairs. A ready example is civet cat in the previous chant. Civet forms dyadic sets with ‘cat’, ‘pig’ and ‘bees’, each set signalling an altered significance for its constituent elements. This feature makes possible the study of these relations, as a system, because any element may have a whole range of elements with which it forms a set and these elements, in turn, may pair with still other elements, creating an extensive network of interlinkages. The code for Rotenese ritual language can thus be displayed as a large constellation of complexly interrelated elements but with an array, as well, of elements not necessarily connected to any larger network.

What is more, these interlinkages crosscut conventional grammatical categories, such as verb, adverb, preposition and noun, joining elements instead by what seems to be some other underlying system of semantic values. Tracing relations among these semantic elements—the chains and cycles along edges of what is a symmetric graph—provides a glimpse of the structuring of the cultural code of the Rotenese.

The symbolic analysis of a cultural code

Any form of symbolic analysis must confront the problem of complexity. A prerequisite to this particular analysis is, therefore, the compilation of a relatively large corpus of ritual texts covering an entire range of ceremonial situations. This analysis is based on 25 lengthy chants and a small collection of short chants, the equivalent of just under 5000 lines of verse.
A dictionary, based on initial texts from the closely related speech communities from Termanu and Ba’a, has been compiled. It includes more than 1000 dyadic sets, but does not yet include names that form a large and important subset of the ritual lexicon. In total, the dictionary comprises more than 1400 entries. In the dictionary, each element or lexical item is translated and has listed for it all other elements with which it forms dyadic sets. The dictionary is thus an initial tabulation of relations among elements in the language.

A number of formal methods involving, for example, graph theory, matrix manipulations or a variety of multidimensional scaling techniques can be usefully employed in studying these relations. A formalisation of these relations would be premature and is, therefore, not intended here. Rather, this analysis is intended primarily to indicate what appears to constitute the present core of this ritual language, to trace certain of its symbolic coordinates and to consider its implications.

To define a core among interrelated elements is a matter of degree. Any ‘core’ can be as large or as small as one wishes to define it. In this case, I have selected all elements from the dictionary that have a range of five or more sets. There are currently 37 such elements. A range of five, it must be realised, is an arbitrary figure. Choosing a range of six would, for example, decrease the selection of elements from the present dictionary by more than one-third, while the choice of a range of four would nearly double them. A range of five establishes a key group of elements of sufficient size and complexity to illustrate the argument. The total number of links of these key elements to other elements comes to 250. Since many of these links are internal links, we can perform a further selection by eliminating those elements with less than two links to other elements in the key group. Two links is the minimal number necessary to permit cyclical relations. The resultant core forms a semantic network consisting of these elements with a total range of five or more, possessing at least two links in common. Although it could have been defined either more exclusively or more inclusively, and will most likely, by the application of the same criteria, become—as the dictionary develops—a larger and even more saturated network, nevertheless this core locates the area of greatest semantic density and connectivity in the ritual system. The core consists of 21 elements from 1400 possible dictionary entries. The full list of these terms, with glosses and their links to one another, is given in Table 6.1.

My point is that four, five or six can serve to define an initial selection of elements. A range of seven, however, would define a selection too small to be of particular interest and a range of three too large to constitute a proper core. In the second-stage selection, two internal links appear to be justified because the application of this reduction proceeds by eliminating elements with only one link to any other element of the key terms. Elimination of this element also eliminates its link, which cannot be counted as one of the required two links for some other element. A rule requiring three internal links would systematically eliminate all the elements of the key group while a rule of one would eliminate only a few terms.
### Table 6.1 Core Terms

<table>
<thead>
<tr>
<th>Element</th>
<th>Glosses</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ai:</td>
<td>Plant, tree, stick, wood</td>
<td>Batu, boa, dae, do(k), na’u, oe, tua</td>
</tr>
<tr>
<td>2. Dae:</td>
<td>Earth, land; below; low, lowly</td>
<td>Ai, batu, dulu, loe, muli, oe, tua</td>
</tr>
<tr>
<td>3. Batu:</td>
<td>Stone, rock</td>
<td>Ai, dae, lutu</td>
</tr>
<tr>
<td>4. Boa:</td>
<td>Fruit; counter term for small objects</td>
<td>Ai, hu(k)</td>
</tr>
<tr>
<td>5. Do(k):</td>
<td>Leaf; counter term for objects in strings</td>
<td>Ai, hu(k)</td>
</tr>
<tr>
<td>6. Na’u:</td>
<td>Grass, tinder; the quality of being soft, gentle</td>
<td>Ai, oe</td>
</tr>
<tr>
<td>7. Oe:</td>
<td>Water, semen, juice, liquid</td>
<td>Ai, dae, naü</td>
</tr>
<tr>
<td>8. Tua:</td>
<td>Lontar palm (Borassus flabellifer), the lontar’s products</td>
<td>Ai, dae</td>
</tr>
<tr>
<td>9. Lutu:</td>
<td>Pile, ring or other arrangement of stones; to pile, erect stones; the quality of being well worked, smooth, refined; ritual name: millet</td>
<td>Batu, hu(s)</td>
</tr>
<tr>
<td>10. Hu(-k, -s):</td>
<td>Trunk, base, root, origin; counter term for trees; designation for males in the maternal line of affiliation; term for clan origin festival</td>
<td>Boa, do</td>
</tr>
<tr>
<td>11. Ei(k):</td>
<td>Foot, paw, leg</td>
<td>Hu(k), langa, lima</td>
</tr>
<tr>
<td>12. Lima:</td>
<td>Hand, arm; five</td>
<td>Ei(k), langa, tei(k)</td>
</tr>
<tr>
<td>13. Tei(k):</td>
<td>Insides, stomach, womb; lineage</td>
<td>Langa, lima</td>
</tr>
<tr>
<td>14. Langa:</td>
<td>Head</td>
<td>Dulu, ei(k), lima, iko, tei(k)</td>
</tr>
<tr>
<td>15. Iko:</td>
<td>Tail</td>
<td>langa, muli</td>
</tr>
<tr>
<td>16. Dulu:</td>
<td>East</td>
<td>Dae, langa, muli</td>
</tr>
<tr>
<td>17. Muli:</td>
<td>West; youngest child—that is, last-born</td>
<td>Dae, dulu, iko</td>
</tr>
<tr>
<td>18. Loe:</td>
<td>To descend, to lower, to be low</td>
<td>Dae, tai</td>
</tr>
<tr>
<td>19. Tai:</td>
<td>To balance, to cling (to an edge), to border, to be on the edge</td>
<td>Loe, lu’u, sa’e</td>
</tr>
<tr>
<td>20. Lu’u</td>
<td>To sink or settle down; to lie down (particularly of crocodile and water buffalo half-submerged in water); to brood (of a bird); to request a woman in marriage</td>
<td>Sa’e, tai</td>
</tr>
<tr>
<td>21. Sa’e</td>
<td>To ride or sit; to perch (of birds); to rise</td>
<td>Lu’ü, tai</td>
</tr>
</tbody>
</table>

What this core includes are directional coordinates, the words for ‘earth’, ‘water’, ‘rock’ and ‘tree’, terms for plants and plant parts, body parts and a
peculiar collection of verbs of position involving ideas of balance, ascent and
descent. What is significant, however, is not merely the listing of these elements
but their relations to one another. A graph of these interconnections is shown
in Figure 6.1.

Figure 6.1: Core Terms

**Specific interpretation of the ritual core**

An interpretation of the significance of these core terms within the ritual system
would require lengthy discussion. For my part, this analysis seems to confirm,
at a formal level, certain of the far less formal interpretations I have previously
made of Rotenese ritual. In an article on ‘Sister’s child as plant’ (Fox 1971), I
argue that a major premise of Rotenese rituals is the symbolic equation of man
and plant. Rituals are cast in a botanic idiom and specific plants are manipulated
as icons to define the precise purpose of each ritual. Their general intent is
always life-giving—that is, to provide for the care, cultivation and conduct of a
‘plant’, even to a point beyond death when, for example, outstanding individuals
may be identified with some large hardwood tree, which is then ceremonially
surrounded with stones (*lutu*) to form an enduring megalithic monument. The
occurrence in the ritual core of ‘tree’ (ai), ‘fruit’ (boa), ‘leaf’ (dok) or ‘trunk’ (huk) is therefore revealing. Simple glosses on these terms, however, can be misleading since they function semantically in a complex way. They serve as counter terms for differently shaped objects and form compound semantic labels for parts of the human body: (k)ai-usuk (‘rib-case’), use-aik (‘navel cord’), boa-de’ek (‘kidney’), langa-dok (‘human hair’), di’i-dok (‘ears’) and difa-dok (‘lips’).

My original argument (1971:240) was that there were a sufficient number of these composite semantic labels to permit native speculative exegesis to create the necessary correspondences between man and plant on which the rituals depend. It would now seem, on the basis of this present analysis, that this native exegesis is itself a secondary elaboration of a more fundamental semantic relation. In this regard, the term hu appears to function as a crucial linking node. Hu, as ‘trunk’, is a counter term for trees. Hus is the term for the annual clan feast and, via its links with lutu, refers to those origin celebrations of ‘stone and tree’ that are performed around a ring of smooth stone ‘seats’ at the base of a tree. Hu is also the designation for particular individuals of the maternal line of affiliation, to’o-huk (‘mother’s brother’) and ba’i-huk (‘mother’s mother’s brother’), who are the chief actors in all rituals of the life cycle. Furthermore, hu, in its link with ei(k) (‘foot’), serves as a direct semantic bridge between plant parts and body parts.

The inclusion of a single specific plant, the lontar palm (tua), is particularly pointed since this tree is the one indispensable source of subsistence for the Rotenese—the virtual ‘tree of life’. This large, dioecious palm—the female is marked by clusters of large, hanging fruit, the male by drooping ithyphallic flower stalks—is, I have argued, a focal icon of the Rotenese.

Similarly, in an article on Rotenese symbolic inversions (1973), I suggested that a further premise of Rotenese rituals was an ordering of symbolic space that associated the parts of the body and the directional coordinates. ‘East’ (dulu) is linked with ‘head’ (langa); ‘west’ (muli) is linked with ‘tail’ (iko). The universe, the island of Rote and the Rotenese house are all represented with a ‘head’ rising to the east and a ‘tail’ descending to the west. According to different exegeses, this shape is that of the crocodile, a sacrificial water buffalo or even a man. Whatever its specific shape, the essential system is preserved invariant.

In accordance with this system, the term kona is both ‘right’ and ‘south’; ki is ‘left’ and ‘north’. A series of symbolic syllogisms (‘The east is as broad as the west, but the Sun comes from the east, therefore, the east is greater than the west’, and so on) provides a means of ranking the directions and then, on this basis, there is constructed a host of symbolic associations. For example, native exegesis associates uluk (‘first-born’) with dulu (east) in the analogy that
mulik (‘last-born’) derives from the root muli (west).\textsuperscript{12} What this present analysis indicates is that the initial logic of the system is founded on the relations and equations of ritual language. In the graph of the core terms, ‘head’ (langa) serves as a key node linking body-part terms and the directional coordinates.

Close inspection suggests that there could be several discernible foci within the core of the ritual system. Plant terms are linked by huk to the words for body parts, which are, in turn, linked by langa to the directional coordinates. The root dae, as a noun for ‘earth’, as a directional coordinate ‘below’ or ‘beneath’ and as a common adverbial term ‘lowly’, serves as another crucial connecting node to the chain of positional verbs and to terms for the natural elements ‘water’, ‘rock’ and, above all, ‘tree’ and ‘plant’. In terms of their internal links, ai (‘tree’, ‘plant’), dae (‘earth’, ‘low’, ‘lowly’), langa (‘head’) and hu (‘trunk’, ‘base’, ‘origin’) account for 22 of a possible 31 edges in the graph. The problem is, however, that the elements in this core are highly connected in a complex fashion. In addition, it must be remembered that each element is itself the organising node to an expansive network of semantic elements within the total system. The simple inspection of a reduced graph or the piecemeal examination of various sub-graphs of the system are insufficient, on their own, to provide an understanding of the whole.

**Semantic networks and computer classification**

The alternative to an intuitive inspection of either a simplified or an enlarged graphic representation of the elements of ritual language must, it seems, be some method of computer classification. The question is not whether to adopt such a strategy—for the complexity of the system leaves little choice—but rather what form of wording strategy to adopt amid the numerous, diverse and ever-increasing number of available methods. For this question, there is no simple answer. Theoretically, it is possible to argue for different methods in terms of the properties of the measures one wishes to consider; pragmatically, it is possible to experiment with several methods to see which provides more ‘useful’ results. In this regard, there can hardly be a ‘true’, ‘natural’ or necessarily ‘best’ method. The temptation is to mistake these methods for what they are not: to allow the arbitrary to assume the appearance of the natural. The gain in the adoption of any of these methods is one of intelligibility in the face of complexity and, for comparative purposes, the means of a standard procedure for treating different systems.

\textsuperscript{12} I am grateful here to Professor Meyer Fortes, whose studies on the ritual importance of the first-born, presented at a colloquium at Harvard (November 1973), have helped me correct my confusion of the Rotenese distinction between ‘first-born’/‘last-born’ and ‘elder’/‘younger’.
The core terms—or the relations among any number of elements in ritual language—can be conceived of as a graph and represented by the N x N incidence matrix of that graph. The range of any element—the incidence of that node in a graph—consists of all its positive entries with other elements of the matrix. To determine a measure of similarity among a set of such elements, it is necessary to decide on the properties that constitute the semantics of the system. Several properties would seem to be extremely important: first, every element should be considered not merely in terms of its link with any other element, but in terms of the other pair-wise links it might possess, together with that element, to additional elements in the system. This, in effect, involves considering all dyadic sets and matching elements by the sets they form with each other and via third elements. Second, every element should be considered as a link with itself since this will permit the incorporation of invariant terms—that is, terms in ritual language that have no pairs and functions as a repetition of themselves. In other words, the diagonal of the incidence matrix ought to consist of positive entries. Third, since elements have different ranges of association, some account ought to be taken of the varying total range that any two elements possess. Fourth, the coincidence of all positive matches in the matrix should be counted as more significant than the coincidence of an absence of a match. With these properties in mind, we can adopt, from among the formulae that have been devised to provide a measure of similarity or what is called, in numerical taxonomy, the coefficients of association (Sokal and Sneath 1963:128), a formula that consists, roughly speaking, of the intersection of the range of A and the range of B over the union of the range of A and the range of B. Formally, similarity is defined as follows, where $x_{ij} = 1$ if element $i$ pairs with element $j$; otherwise 0:

$$Sim(i,j) = \frac{\Sigma(2x_{ik} \times x_{jk})}{\Sigma(x_{ik} + x_{jk})}$$

This establishes a first stage—a reasonable measure of pair-to-pair similarity. On this basis, we can derive a new inter-element similarity matrix and, from this matrix, it is possible to devise a variety of inter-group orderings depending on, as always, the measures one adopts. Among the more sophisticated, readily available and economic sorting strategies for such inter-group similarities are the agglomerative or aggregative hierarchical clustering techniques. There is any number of these and their properties vary with the measures utilised (Lance and Williams 1967). Because of the relative economy of these techniques, however, it is possible to develop a program that will, in a single run, submit the same data to a clustering process by a number of different measures of

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13 The particular application of this formula as an estimator of node similarity has been discussed in Sodergren (1973). I wish to thank Mr Sodergren for his assistance on this section of the chapter.
cluster distance or size. A program of this kind has been developed at Harvard (Olivier 1973). It begins with N single-item clusters and merges pairs of clusters iteratively to form a single N-item cluster. Input is an N x N symmetric matrix of similarity (or dissimilarity) measures for the set of N items. Output is a tree-diagram with an added column of ‘values’ for each cluster depending on the particular method. Using this program to experiment on the matrix of core terms and studying the clustering obtained by various measures, I concluded that the measure of distance between clusters A and B defined as the mean of the similarities between points A and B gave the closest approximation of my own intuitive understanding of the relations among the core terms. Figure 6.2 is the tree-diagram of the aggregative hierarchical clustering of the core terms by mean distance. It can be compared with the graphic representation of these same terms in Figure 6.1.

Figure 6.2: Tree Diagram of Aggregative Hierarchical Clustering

The point of this exercise has been to indicate a method that can be used to study the semantic relations of ritual language, noting that, as the complexity of the system increases, it becomes more difficult to decide on criteria for distinguishing among the results of these methods. Implied in this discussion is

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14 Relying on the Olivier program, I used four measures to cluster the matrix of core terms: the measure of distance between clusters A and B defined as 1) the minimum, 2) the mean, and 3) the maximum of the similarities between points A and points B and also as 4) the increase in total size due to merging A and B into a single new cluster, C (Olivier 1973:3–6). The pair-wise ‘similarity’ of many terms (batu//lutu, boa//dok, lima///teik, ai//dae, lu'u//sae, for example) was consistent for all methods at the lowest level of clustering, whereas differences appeared expectedly at higher levels of ordering. These differences by methods 2 and 4 occurred only at the two highest levels of clustering, and it is therefore worth pointing out that, according to Olivier, these two methods ‘give useful results over an especially broad range of applications’ (1973:7).
the suggestion that a possible strategy would be to adopt the method that, on a
limited scale, gives the best approximation of some intuitive understanding and
to assume that, on a larger scale, it will continue to do so. This leaves ‘intuition’
as a foundation. It is, however, evident that, whatever my intuitions are, they
are based on present-day Rotenese practice and the insights and interpretations
provided to me by Rotenese elders and chanters. It is also evident, at a
theoretical level, that the semantic networks of ritual language are sufficiently
complex to permit a variety of practices and, as I have frequently noted in
my ethnographic descriptions, alternative interpretations of the same practice.
What this seems to imply is that, however one approaches it, ritual language
is a lived-in symbolic structure, incapable of exclusive comprehension by any
monotypic representation.

This does not, however, mean that the exercise of comprehension is useless.
In fact, proceeding from binary oppositions to semantic networks highlights
a fundamental aspect of these semantic relations: that certain elements have a
range of pairs, that these create networks and that a core, however it is defined,
of multi-conjugate nodes within the network acts as primary symbols in the
system. This involves consideration of the implications of hierarchy within
ritual language.

Hierarchy, taxonomy and polysemy

Structural analysis, of the form we began by considering, is epistemologically a
theory of oppositions. For Lévi-Strauss, this analysis consists of the theoretical
modelling of the possible combinations and permutations of some defined set of
oppositions. Structure is represented as a model that pertains to certain ‘strategic’
levels of reality and it is the task of the investigator to discover the ‘order of
orders’ that, by transformation, encompasses these separable autonomous levels
of structured reality (Lévi-Strauss 1953:528–9, 547–8). Semantically, what
this appears to imply is that all binary oppositions are generally autonomous,
isomorphic and equal in so far as they are the product of the same ordering
logic. Needham, on the other hand, makes the consistent assertion that only
certain societies—those of prescriptive alliance—are characterised by a
pervasive concordance of complementary oppositions. The ordering of dual
categories in all other societies is theoretically an open question. Hence, except
in the proposed special test case of prescriptive alliance societies, what is
lacking in this epistemology, as critics, particularly Marxist critics (cf. Terray
1972:40), have noted, is any articulated concept of hierarchy. The possibility of
transformations between strategic levels is not the same as a hierarchy of levels
nor does it seem to involve a hierarchical ordering of elements at any specific
level. In any semantic theory, opposition without hierarchy can only lead to
endless manipulations.
In contrast, the strength of American ethno-semantics has been in the elucidation of hierarchy via paradigms, taxonomies, tree structures, developmental sequencing and flow-charting. In these investigations, however, lexical ‘contrast’ has generally involved the notion of ‘in-elusions’ and has thus resulted in the construction of bounded hierarchic structures ordered horizontally by differentiation and vertically in terms of a subordinating continuum of the particular to the more general. Applying these notions to the construction of folk taxonomies of natural language raises, as the theoreticians of these methods quickly realised, a variety of so-called ‘special problems’: multiple and interlocking hierarchies, extra-hierarchic relations, synonomy, homonymy and polysemy (cf. Conklin 1969:41–57). It was in response to these hierarchic special problems that Charles Frake first proposed the study of ‘interlinkage’ (1969:123–37), criticising, in the process, the concept of bounded semantic domains based exclusively on a hierarchy of inclusion:

Any concept is inter-linked by a variety of relationships to a large number of other concepts, which, in turn, are inter-linked with still other concepts. If a semantic domain is a set of related concepts, then it is clear that there is no one way to separate the conceptual structure of a people into a finite number of discrete, clearly delimited domains. Rather, we have a network of relations whose links enable us to travel along a variety of paths from one concept to another. (Frake 1969:132)

The problem involves the relation of hierarchy and interlinkage and requires a careful and lengthy consideration. Here, only a few remarks can be made. Of its total vocabulary, Rotenese ritual language has a relatively small number of primary symbols that, by their range of linkages, ‘organise’ other elements, which similarly organise still others to form what appears to be a hierarchy of symbols. If one accepts this understanding of hierarchy, clearly this linguistic hierarchy does not resemble the previous taxonomic structures proposed for the study of folk classification. One can, however, attempt to interpret the higher-level primary symbols in the light of ritual practice; they comprise a seemingly odd and certainly non-obvious collection of lexical items. Ai (‘plant, tree’), for example, would—in a standard plant taxonomy—appear as the maximal taxon and perhaps again at the next level of contrast, whereas tua (‘lontar palm’) would occur at or near the lowest contrastive level. In ritual language, however, ai and tua are linked and, because they both possess an equal range of linkages, they have the same hierarchical value. In this hierarchy, it is not taxonomic generality but polysemy—the property of a symbol to relate to a multiple range of other symbols—that becomes the criterion for hierarchical inclusion. To judge from the study of other ritual systems, there seems to be good empirical justification for this kind of criterion. Turner (1967:48–58) has
elegantly and subtly argued for a similar criterion. No less than the *mukula* of the Ndembu, the all-important *tua* palm of the Rotenese, can invoke a nexus of symbolic associations.

The implications of this hierarchy for the understanding of change are considerable. Change in a structure conceived of as equal, autonomous dyads can proceed only partially and in piecemeal fashion. Change in a system of hierarchically interrelated combinations of dyads can be appraised only by examination of the point at which this change occurs. Change in this system is a dialectic process but not all change is equally significant. The rupture, resolution or synthetic engagement of elements with a limited range of associations in some peripheral dyad may have little effect on the total system, whereas a similar change among any of the higher-level elements would have immediate and systemic effects throughout the language. The hierarchy of certain symbols—their position within the hierarchy—governs the particular manifestation of the whole.

We need not discuss these notions of change abstractly but can consider what is occurring at present on Rote in terms of ritual language. The majority of Rotenese have comfortably become Protestant Christians without rejecting their former traditions. A small majority is, however, evangelically engaged in a polemic against these traditions, contemptuously referring to the rituals as a ‘religion of rock and tree’. They have chosen a key dyad of primary symbols as the focus of their attack. On the other hand, the introduction of the Malay Bible, and particularly the Old Testament with its elaborate tradition of parallel verse, has provided unintended support for Rotenese ritual language. The roles of chanter and preacher are not incompatible, and a modern ritual can interweave chant segments, Psalms or quotations from Isaiah without apparent contradiction. Furthermore, what seems to have begun is a local-level retelling of the Bible in ritual language.

The chanter Peu Malesi, who provided me with version one of the myth of the house, was among the first chanters to offer to recite for me on my return to the island. Now, with the full and unchallenged power of a mature talent, he proposed to tell me what he described as an ancient Rotenese myth about the origin of death. This myth, which he told me before an assembled group of Rotenese, was about the ancestral pair, the man, Teke Telu, and the woman, Koa Hulu, who lived in a walled and forbidden garden at the beginning of time. The woman, Koa Hulu, was tempted by an ‘eel and snake’ to pluck and eat a ‘fruit sweet as lontar syrup and a leaf honeyed as bee’s water’ and by this act brought into being the tools for ‘hewing a coffin and digging a grave’. Thus, according to the standard formulaic phrase, there arose ‘the death of the spirits and the decrease of the ghosts’.
This unmistakable Rotenese version of Adam and Eve was delivered in flawless ritual language. As such, it was readily accepted by those who heard it, not as something new, but as something extremely old: a carefully guarded segment of the esoteric knowledge that proves the often-stated Rotenese contention that the Bible is another version of Rotenese tradition. This kind of retelling transforms the seeming challenge of Biblical Christianity into the means of maintaining the essential distinctions of the ritual-language code. It would be foolhardy at this point to predict what changes may occur within the system of ritual language in its encounter with Christianity, but it is possible to appreciate how, in a lived-in system of this complexity, a simple relational change of primary symbols can have far-reaching unintentional effects.

Explorations in ritual language

The initial impetus for the study of the semantic networks of ritual language was comparative: to establish recognisable procedures for the analysis of different ritual systems. Many societies in eastern Indonesia—on Sumba, Timor and Flores—possess traditions of parallelism similar to those of the Rotenese. An adequate corpus of parallel texts already exists for the Atoni of Timor (Middelkoop 1949) and there certainly exist possibilities for doing research on semantic parallelism among other populations on Timor. Comparison of the semantics of the closely related ritual languages of Timor could well become a special field of study. It is also possible to begin this comparative venture by a microanalysis of the different semantic relations between dialect areas of Rote. Beyond eastern Indonesia, large collections of parallel verse exist for Nias, a number of Dayak groups in Borneo and for the Sá’dan Toraja of the Celebes. Gradually, it might be possible to advance comparisons among the semantic networks of these more widely separated languages and from Indonesia to similar systems in South-East Asia and elsewhere.

A further research possibility of semantic networks is to consider their expansion and to trace the formal associations on any selected node within the system. Essentially, the exploration of these networks is the converse operation to that of defining a core. Whereas any element may be chosen as a starting point, it is of particular interest in dealing with verbal and adverbial elements since the referential approaches to the study of semantics are generally inadequate to deal with this vast array of lexical items. In this connection, we can consider the associations of the term loe (‘to descend, to lower, to be low, lowly’). The chain of associations emanating from loe, through tai, sa’e and lu’u, comprises a network of 90 elements, excluding all links to other core terms. To simplify

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15 See Fox (Chapter 5 in this volume) for a discussion of the network of verbs of ‘speaking’ in Rotenese.
this large network for the purposes of this discussion, we can exclude all links from *loe* to other core terms, including *tai*, *sa’e* and *lu’u*. This still constitutes a sizeable network of 21 elements. The list of these elements with their glosses and links is set out in Table 6.2.

### Table 6.2 Formal Associations of *Loe*

<table>
<thead>
<tr>
<th>Element</th>
<th>Glosses</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Loe</em>:</td>
<td>To descend, to lower, to be low</td>
<td><em>(Dae), dilu, le’a, nggolo, peu, sai, sali, (tai), teë</em></td>
</tr>
<tr>
<td>2. <em>Dilu</em>:</td>
<td>To bend over, to turn down</td>
<td><em>Loe, sesu</em></td>
</tr>
<tr>
<td>3. <em>Sesu</em>:</td>
<td>To bend, break, or cut at a joint</td>
<td><em>Dilu</em></td>
</tr>
<tr>
<td>4. <em>Le’a</em>:</td>
<td>To stretch, measure, extend, pull, tug, drag; to divine (by stretching spear: Le’a te)</td>
<td><em>Hela, kani, loe, nole, nuni, tona, tuluk</em></td>
</tr>
<tr>
<td>5. <em>Hela</em>:</td>
<td>To pull, to tug, to pull out; to divorce (in the compound hela-ketu)</td>
<td><em>Le’a, nole</em></td>
</tr>
<tr>
<td>6. <em>Nole</em>:</td>
<td>To carry something so that it hangs down, to drag; to divorce (in the compound nole-ladi)</td>
<td><em>Hela, le’a</em></td>
</tr>
<tr>
<td>7. <em>Kani</em>:</td>
<td>To hang down loosely; to divine (by the hanging-stone method: kani batu)</td>
<td><em>Le’a</em></td>
</tr>
<tr>
<td>8. <em>Nuni</em>:</td>
<td>To pull, to lead (a horse, for example, by a rope)</td>
<td><em>Le’a</em></td>
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<tr>
<td>9. <em>Tona</em>:</td>
<td>To push forth; to master, to overpower</td>
<td><em>Le’a</em></td>
</tr>
<tr>
<td>10. <em>Tuluk</em>:</td>
<td>To shove, to push</td>
<td><em>Le’a</em></td>
</tr>
<tr>
<td>11. <em>Nggolo</em>:</td>
<td>To protrude; a protuberance, promontory, snout (of an animal)</td>
<td><em>Loe</em></td>
</tr>
<tr>
<td>12. <em>Peu</em>:</td>
<td>To jut forth, to stick out (especially of trees or the branches of trees)</td>
<td><em>Loe</em></td>
</tr>
<tr>
<td>13. <em>Sai</em>:</td>
<td>To appear, to arrive, to come upon a place; to fall (of rain)</td>
<td><em>Loe</em></td>
</tr>
<tr>
<td>14. <em>Sali</em>:</td>
<td>To pour out, to overflow; overflowing</td>
<td><em>Doko, loe</em></td>
</tr>
<tr>
<td>15. <em>Doko</em>:</td>
<td>To hang, to droop, to recede; receding</td>
<td><em>Benu, sali, (tai)</em></td>
</tr>
<tr>
<td>16. <em>Benu</em>:</td>
<td>To balance, to be balanced; balanced or balancing</td>
<td><em>Doko, leo</em></td>
</tr>
<tr>
<td>17. <em>Leo</em>:</td>
<td>To circle, to go round; circling, surrounding</td>
<td><em>Benu</em></td>
</tr>
<tr>
<td>18. <em>Teë</em>:</td>
<td>To rest, to stand still, to place on end; to erect</td>
<td><em>Hani, loe</em></td>
</tr>
<tr>
<td>19. <em>Hani</em>:</td>
<td>To wait, to watch over, to tend (animals)</td>
<td><em>Bafa, hulu, teë</em></td>
</tr>
<tr>
<td>20. <em>Bafa</em>:</td>
<td>To wait in ambush, to hide</td>
<td><em>Hani</em></td>
</tr>
<tr>
<td>21. <em>Hulu</em>:</td>
<td>To draw in; to gather (animals) together</td>
<td><em>Hani</em></td>
</tr>
</tbody>
</table>
The graph of their associations appears in Figure 6.3.

Here, *loe* can be seen as a point of articulation for a variety of verbal forms. Some, such as *nggolo, leu* and *sai*, occur in a limited, specific orbit with *loe*. Some, such as *dilu, teë* and *sali*, lead outward in a chain of associations, allowing us to follow, for example, the by no means obvious Rotenese associational logic that one attempts to encapsulate by glosses on descending, pouring out, drooping, balancing and surrounding. Another, *leâ*, forms a further point of articulation for a new orbit of associations.

Analysing these networks solves certain problems but raises others—particularly in regard to homonymy. To take one instance, *bafa* in Rotenese has the meanings: 1) ‘to wait in ambush, to hide’, and 2) ‘opening, mouth, beak, gully’. Since these two occurrences of *bafa* sort themselves out in different regions of the semantic network, they can easily be recognised as homonyms. On the other hand, *doko*, although on its own it does not link with *tai*, does so in a compound term: *doko-doe//tai-boni*. This dyadic set is used specifically in the context of bride-wealth negotiations to indicate the persistent prodding or gentle demanding that is supposed to characterise these negotiations. One could formally treat *doko* and *doko-doe* as separate, but associational links of *doko* and *tai* with *loe* suggest that however difficult it can be to divine the association of ‘demanding’ and ‘drooping’, there would appear to be some relation.

There is, however, still another major exploratory possibility in the study of ritual language. Jakobson called attention to the investigation of parallelism within the context of an important discussion of what he described, in *Fundamentals of Language* (Jakobson and Halle 1956), as the ‘twofold character’ of language: selection and combination. Developing distinctions established in linguistics since Saussure, Jakobson identified the associative, the paradigmatic and the selective aspect of language with ‘metaphor’ and the syntagmatic and the combinative aspect with ‘metonym’. (Lévi-Strauss’s adaptation of these notions has given them currency in the anthropological literature.) In this terminology, the phenomenon of parallelism relates exclusively to ‘metaphor’. In the case of Rotenese ritual language, the delineation of certain of the parameters of metaphor makes it possible to focus attention on metonymic creation.

The issue can also be posed in a different fashion. Rotenese ritual language consists of parallel verse that occurs in grammatically similar lines. In theory, one chanter responds to another by supplying the appropriate second verse to a verse given him by the first chanter. In practice, this is true only of chanters who are acquainted with each other; newly acquainted chanters, in my experience, require a considerable amount of cueing before they begin to respond properly to one another. In theory, the circle of Rotenese dancers is supposed to answer, in chorus, each line of verse initiated by the chanter in its midst. In practice, a chanter
sings both verses before the chorus picks up the second verse although this is said not to have been the case formerly. In theory, therefore, when the whole of the ritual-language dictionary has been computerised, it would be an extremely instructive goal—as well as a methodological test—to develop a response program that would answer any line of Rotenese verse with a correspondingly correct line. The problems with this are formidable but grappling with them could elucidate what is involved in metonym.

Figure 6.3: Graph of Formal Associations of *Loe*

We can take two lines of verse from the myth of the house as illustration. The first verse presents no problem whatsoever:

1) **Ala fe sipa aba-do**  
*They give the plumbline marker*

*Ala* (they) and *fe* (give) are invariant elements so that all that is required is the conjunction *ma* (and) or *do* (or)—either is permissible—and a search in the
dictionary for what pairs with *sipa aba-do* (listed as a compound since this is the only way it occurs). The answer is a single link—*funu ma-leo*—so that the only possible correct response is:

2) *Ala fe funu ma-leo*  
They give the turning drill

It is apparent, however, that since an element may pair with as many as 10 or more other elements, the permutations and combinations of elements that must be considered to obtain a proper response are potentially enormous. Furthermore, there exists the question of what constitutes a proper response and whether there could be more than one such response. Consider the following line:

3) *Ala fe lilo ma-langa menge*  
They give gold chains with snakes’ heads

The response to this in the myth is:

4) *Ala fe kapa ma-ao foek*  
They give buffalo with crocodile-marked bodies.

There is something strikingly ‘mythological’ about a correct response that attributes ‘crocodile-marked bodies’ to water buffalo. One must first comprehend that, according to the mythology, all buffalo originated from the sea as a gift of the Crocodile. One must then realise that in Rotenese *foe* is the word for crocodile and the term used to refer to flecks of white skin pigmentation on men and animals. Etymologically, there is evidence that these two usages of *foe* are derived from different roots, but it is more important to be aware that, in Rotenese folk etymology, they are identical. Other animals can have white markings: the ‘cat and civet’ mentioned in the first lines of the myth of the house are described as ‘pied-nosed and white-tailed’. It is when a buffalo has similar markings, however, that it is considered a throwback that shows evidence of its origin. Folk etymology based on mythology provides the essential means of linking snake-headed chains and crocodile-marked bodies on buffalo.

This ‘correct’ response appears even more interesting when compared with other possible responses. *Lilo* pairs with seven other elements and *langa* with eight, so that there are altogether 56 possible responses according to the following table:
The majority of these combinations produce nonsense:

- **5) Ala fe besi ma-dulu foek**: They give iron with crocodile’s east
- **6) Ala fe buna ma-fude foek**: They give a flower with crocodile’s froth
- **7) Ala fe lusi ma-alu foek**: They give a flower with crocodile’s pestle.

The following possible responses, however, raise interesting questions.

- **8) Ala fe kapa ma-ei foek**: They give a buffalo with crocodile feet
- **9) Ala fe haba ma-iko foek**: They give a braided gold with a crocodile’s tail
- **10) Ala fe batu ma-ao foek**: They give a rock with a crocodile’s body

Line (8) creates confusion in Rotenese classifications. The crocodile, like the monkey, is considered to resemble man in that its forelegs are *lima* (hands, arms) and hind legs are *eik*. A water buffalo, on the other hand, has four *eik*. So a crocodile-footed buffalo would be an anomalous creature.

Line (9) is a plausible response but describes a nonexistent cultural object. For centuries, Ndaonese craftsmen have braided gold strings for the Rotenese and many of these end with reptilian ‘heads’, but no-one—to my knowledge—has fashioned a corresponding ‘tail’ to these strings, though this would certainly be within the symbolic conventions of the artistic tradition. The question, however, would remain why its ‘tail’ rather than its ‘head’ should identify this object.

Line (10) poses further problems since it describes a common object on Rote. There are numerous rocks of varying sizes that are described as the solidified remains of former crocodiles. The island of Rote, as a whole, is said to be one such enormous rock. The response is perfectly sound, mythologically acceptable, but a rock might be inappropriate as bride-wealth.

As a first-level approximation, what is needed is an understanding of the syntagmatic compound terms, irreversible binomials and ritual formulae, of which...
there are many, to eliminate the most unlikely and nonsensical combinations. By
further reflecting on the networks of ritual language, it might be possible to
develop a canon of accordance that would account for still more combinations.
This is, however, clearly not the same immense task that the generative linguist
sets himself in determining the logical, syntactical, inferential and contextual
rules that underlie well-formed, meaningful sentences. For one, the investigation
is directed towards a definable segment of possible Rotenese utterances. Second,
it is not concerned with generating new sentences but with matching appropriate
sentences to already given ones by specific lexical rules. Furthermore, ritual
language—although not context free—is a special speech form of formulaic
devices whose patterns make change applicable to a variety of ritual situations.
Still, however, in the process of this investigation, it is probable that there will
occur an abundance of engaging responses that will have to be discussed directly
with the chanters of Rote to involve them in the explication of their art.

Comments and conclusions

In this chapter, I have discussed various operations and analyses that can be
performed in and on Rotenese ritual language. At this point, I would like to
shift perspective and comment briefly on ritual language in relation to the
whole of Rotenese verbal culture. It seems evident that a symbol in ritual
language—‘earth’, ‘rock’, ‘tree’—is related to yet differs in its use in, for
example, the Rotenese stock of dream omens and consequences, in proverbs,
in folktales and genealogical narratives, in the oral codes for legal decisions
at Rotenese courts, in ordinary conversation and in baby talk. Each of these
usages, speech forms or genres—and more that could be enumerated—I would
label a ‘language stratum’, following Friedrich Waismann in what he announced
as ‘a programme for the future’. Already in 1946, Waismann was calling on
those interested in linguistic analysis to reverse a traditional approach. Instead
of defining words by their referents and then analysing referents by their
subject matter—material objects, sense data, vague impressions—he urged the
examination of linguistic strata to determine their subject matter:

If we carefully study the texture of the concepts which occur in a given
stratum, the logic of its propositions, the meaning of truth, the web
of verification, the sense in which a description may be complete or
incomplete—if we consider all that, we may thereby characterise the
subject matter. We may say, for instance: a material object is something
that is describable in a language of such-and-such structure; a sense
impression is something which can be described in such-and-such a
language; a dream is—, a memory picture is...and so on. (Waismann
1965:246)
In the same discussion, Waismann points to the ‘systematic ambiguity’ that words take on as they are used in different strata. On this evidence, the propositions of symbolic logic would be, for instance, an inappropriate means for the study of the symbolism of dreams.

Following this lead, I would argue that symbols in Rotenese do indeed change sense—in ways I would be unable to adequately describe—as one proceeds from baby talk or ordinary conversation to the verses of ritual language. I would, however, go further and make explicit what is implicit in my earlier discussion. I would argue that there is a hierarchy of linguistic strata in Rotenese and that this hierarchy involves—to adopt an inadequate metaphor—a ‘tightening’ of the logic of relations among symbols. I would also see this hierarchy as dependent on a progressive learning process: the gradual comprehension and systematisation of a culture. Ritual language is the recognised culmination of this learning and, for this reason, with the exception of a few gifted individuals, it is the special preserve of the elders. When Bea, the little girl who lived with us, used to refer to the sun as ‘moon two’, she had embarked on the Rotenese path of learning that, in a few instances, can lead to profound understandings such as those of the Head of the Earth in Termanu, who, before he died, had ceased to be referred to by any other name than that of his clan: Meno.

There is a further social aspect to this argument. When we consider all the situations on Rote in which ritual language may be used—greetings and farewells, petitions, courtship overtures, preludes to negotiations and the ceremonies of the life cycle—they are all moments of formalised interaction that call for a clear statement of shared premises. The social effect of symbols at this level, one can hypothesise, has to do with the clarity of their expression and the density of the semantic network they invoke. The formal simplicity of dichotomous thinking and the continuous partition of all things by two offers the most efficient means to this end.

Comparative evidence, I believe, would lend support to this position. A survey of some of the major instances of pervasive canonical parallelism in its distribution throughout the world’s oral traditions suggests that this speech form or language stratum is reserved for special situations: for the preservation of past wisdom, for the utterance of sacred words, for determining ritual relations, for healing and for communication with spirits. The litanies of the priests of Nias, the Book of Counsel of the Quiche Maya, the poetry of the Old Testament, the prayer chants of the Hawaiians, the spirit verse of the Kachin, the cosmological speculation of the Ngaju and the epic deeds of gods and men recorded in the Kalevala retain, by their parallelism, idealised statements of a specific cultural order.
This has many implications for an understanding of binary categories and for an analysis of them. The curious feature of the dyads in elaborate traditions of parallelism is that they make no distinction between similars and opposites—though commentators on parallelism have attempted to make these distinctions. Complementary, contrary and contradictory terms have in common their relation to one another as a pair, so that possibly, at a first-order level, there is a fundamental unity of similars and opposites, a primacy in polarity. Thus the creation of a semantics of relations would be a prerequisite to a semantics of reference. Binary analysis would, therefore, be an essential tool in this investigation, but its field would be more clearly delimited. Jakobson has repeatedly argued that the binary principle appears to underlie much linguistic expression and most poetry. Systems of parallelism are clearly extreme and relatively transparent developments on a binary principle and for this reason are suitable for such analysis. By this same reasoning, however, it would seem unlikely that other aspects of culture would be equally suited for binary analysis.

In advancing the investigation of binary categories, we might be able to broach a speculative question posed by Mauss and Durkheim, implied in Lévi-Strauss’s *Mythologiques* and directly formulated by Needham: whether there exist ‘certain things in nature [that] seem to exert an effect on the human mind, conducing to symbolic forms of the most general and, even universal, kind’ (Needham 1964:147). This is to ask whether certain instruments of the natural world offer themselves as a prevalent means to conceptualisation and thereby form the material basis for the primary symbols of man.