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Aboriginal conceptions of the workings of nature

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PART I

> These cosmogonies belong to the ancient world — a world peopled so sparsely that nature was not as yet overshadowed by man . . . Nature hit you in the eye so plainly and grabbed you so fiercely by the scruff of the neck that perhaps it really was still full of gods . . . This ancient world ended with Rome, overpopulation put a stop to it.
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> Boris Pasternak, *Doctor Zhivago*

The distant ancestors of the Aborigines colonized the Australian continent at least 40 000 years ago. To do this required the crossing of oceanic water barriers between 60 and 100 kilometres wide even at times of glacial low sea levels.[1] The colonization of Australia constitutes the oldest firm evidence we have of substantial watercraft and of the human capacity to cross the sea. Recent archaeological field research in New Ireland has shown occupation in a cave there with a basal date of 32 000 years, showing that two other water barriers, namely the Vitiaz Strait between New Guinea and New Britain and the St George's Channel between the latter and New Ireland had also been crossed during this primary colonizing process.[2] Modern man was already established out on the largest islands of the western Pacific at the same time that his relatives, the Cro Magnon population, were rapidly replacing Neanderthalers in Europe. Indeed the two events are probably linked, both being manifestations of a fundamental change in human history from about 40–50 000 years onwards associated with the appearance and rapid geographic spread of biologically modern humans.[3] New Guinea and Australia formed parts of the same land mass. The flat and ancient Australian plate with its laterized and deeply weathered soils extended to the foot of the New Guinea cordillera, the latter formed of recent, mineral-rich volcanics and under a regime of nearly constant rainfall. Later, during the height of the last ice age from 24 000 to 12 000 years ago, the floor of Bass Strait was also exposed, with a dry land bridge to the glaciated highlands of Tasmania.

The first colonists, coming from the coastal swamps of South East Asia, would have found the tropical Australian–New Guinea shores familiar to them in several essential elements as regards their subsistence. The molluscan fauna of the two regions share most genera, as do the fish. Important food plants such as the tubers of yams (*Dioscorea*), taro (*Colocasia*), and arrowroot (*Tacca*); the seeds of rice (*Oryza*) and cycads; and the fruits of such trees as *Terminalia, Canarium, Syzygium* and various palms are found both in tropical Australia/New Guinea and in South East Asia.[4] However, the land fauna of the

new continent would have been totally different, with its marsupials, monotremes and reptiles. Also, people extending their range southwards into the heart of the Australian continent would have to cope with an increasingly alien flora. Such trees as Eucalypt, Casuarina and Acacia shaded grasses with edible seeds, such as *Panicum* or *Nardoo*, but the technology to grind and to utilize these had to be learnt.

Research over the past twenty-five years has revolutionized our knowledge of the prehistory of Australia. In 1961, there was but one securely dated piece of evidence of human presence at 10 000 years ago. Now we can demonstrate that occupation had occurred throughout every major ecological zone of the continent at least by about 25 000 years ago. These areas ranged from the highland valleys of New Guinea by 30 000 years ago; the tropical lowlands of both New Guinea and the savanna plains of northern Australia by 30 000 years at least; the rivers and lakes of western NSW back to 40 000 years; the south-west tip of the continent by the same date and even the very heartland arid core in the mountain ranges west of Alice Springs by 20 000 years ago. In Tasmania, the glacial low-sea-level bridge gave access to people who promptly took it, leaving evidence of their occupation at about 20 000 years ago even in caves overshadowed by the valley glaciers of the extreme south-west.

This occupation of all of the major ecological zones of the continent implies that the Aboriginal ancestors had mastered the key problems for subsistence. These centred on the utilization of plants and the hunting or capturing of animals. In addition there would have been the need to organize these activities on a seasonal basis, and to have systems for the alleviation of the effects of droughts or other natural stresses. To hunt, to dig and to carry required the manufacture of artefacts of wood and of fibre. To cut these required tools of stone, the suitable materials for which were usually restricted to isolated outcrops. The first colonists used fire both as the essential element of the hearth — as warmth, to cook, and as the focus of domestic society — and also as a major tool to transform the environment through firing the country in a systematic way in hunting or to clear the ground for easier travel. The early phase of human colonization saw the rapid extinction of more than a third of the existing land fauna, in particular the so-called 'giant marsupials' including the rhino-sized Diprotodontids, Procoptodons and Protemnodons and larger cousins of still existing species. All of this evidence shows that, even by 25–30 000 years ago, the essential economic adaptations to the Australian continent had been made. We can assume that these people had a detailed and sophisticated knowledge of the properties and behaviour of plants and animals, and they knew where to get specialized resources such as fine stone or woods from which to manufacture their technology.

Direct archaeological evidence

On the shores of the now extinct Lake Mungo, at 30 000 years ago, people, probably women, dug fresh-water mussels (*Velesunio ambiguous*) from the mud and fished for golden perch (*Plectroplites*), using either nets or movable woven barriers.[5] The integration of these lake-edge foods with those of the interior scrubs, such as small marsupials and emu eggs, indicates a planned

economic system. In some highland New Guinea cave sites, now-extinct large marsupials such as Protemnodon were hunted.[6] In the extreme south-west of the continent at the cave of Devil's Lair, the animals killed were kangaroos and wallabies, their charred and smashed bones discarded on the edges of camp hearths.[7] Equally, in the valleys of south-west Tasmania, overlooked by glaciated peaks, red-necked wallabies were hunted in large numbers and their carcasses brought back to snug limestone caves to be cooked and eaten.[8] Here also there is evidence for the utilization of bracken fern, microscopic pieces still adhering to stone tools.

At such antiquity, the main surviving artefacts are those of stone, and archaeologists, while seeming to be obsessed by such tools, nevertheless can deduce remarkably accurate scenarios as to their prehistoric usage. To cut wood, meat and fibre, sharp flakes need to be produced from suitable rocks. These must be capable of conchoidal fracture, which will result in the formation of sharp flakes. Such rocks in Australia include silicified quartzites, as well as finer chalcedonies and cherts. In the Mungo site mentioned above, the stone tools had been manufactured from silcretes obtained some 30 kilometres from the main habitation sites. In caves on the escarpment edge of western Arnhem Land, the oldest tools, dating back to about 30 000 years, were also made from fine quality highly silicified quartzites, obtainable only in a few places on the exposed cliff faces; and also pink cherts probably located in a small area (Barramundi Creek), up to 50 kilometres from the sites where they were discarded.

There were also more exotic raw materials, which, while being of minor importance in the total tool kit, nevertheless indicated that their makers appreciated their superior qualities and were prepared to go to highly localized quarries or to obtain them through trade. Late Pleistocene assemblages along the coast of Western Australia contain numerous artefacts made from an Eocene fossiliferous chert.[9] The distribution of these artefacts extended over an area of 40 000 square kilometres, and in time from about 35 000 years ago to 5 000 years ago. Then they stopped being used. The explanation is that the source itself was located west of the present coastline and was drowned in the late and post-glacial rise of sea level. The actual deposits of chert have been deduced geologically from the archaeological data.

In south-western Tasmania, from about 17 000 to 14 000 years ago, a few flakes and tools were made from a high-quality true glass. This is now called Darwin glass and was originally formed as an 'impactite' when a huge meteor hit the earth and ploughed a crater one kilometre wide. Such was the dissipation of the energy of impact that parts of the surface rocks were melted and the resulting glass blown outwards to the west in a shock wave. These pieces of glass were discovered by the Aboriginal people of western Tasmania during the last ice age. With the warming of the post-glacial climate, and the flooding of Bass Strait, this region became abandoned by people and eventually clothed in dense rain forest. Darwin glass was first discovered by modern science in 1908, in the form of little pieces scattered on the eastern faces of the West Coast Range, found through mining activities. The actual Darwin crater was found only in 1974, perhaps 17 000 years after its original discovery.[10]

In coastal sites in north-western Tasmania, a new raw material made its appearance some 1500–2000 years ago. This was a silicified spiculite, that is, rock of organic origin from the silica spicules of prehistoric sponges. The source was discovered in December 1985 by bulldozer drivers cutting the survey tracks for a proposed road. The find was confirmed by archaeologists a few months later.[11] However, the Aborigines had found this stone in the depths of rain forest, 2000 years earlier, and had exported it to most of their domestic sites of the region.

Although most artefacts from the distant past are made from stone, in special circumstances artefacts of bone, wood or even fibre can be preserved. A spectacular find of this sort was made in a swamp, called Wyrie, in the south-eastern coast of South Australia. Here, during peat-digging operations, several wooden artefacts were recovered, and subsequent excavations showed them to be 10 000 years old.[12] Tools included finely carved barbed wooden harpoon heads from hard *Casuarina stricta* wood, and several long sections of boomerangs. These had fully carved aerofoil sections, some with a slight twist of angle between one arm and the other. These were totally sophisticated returning boomerangs and represent the oldest evidence in the world for a practical application of knowledge of aerodynamics. Probably these were designed to imitate hawks, in order to get ducks to rise into nets set at the outlet points from the swamps.

Mankind is not to be measured only by his belly. The cremation ceremonies of the young girl at Mungo, about 26 000 years ago, represent the oldest evidence for cremation in the world. The Mungo 3 human was laid in a grave scattered with red ochre. In the Lindner Site, in Deaf Adder Gorge (Northern Territory), large pieces of industrial-quality haematite were found, with clearly defined grinding facets, and dated to between 25–30 000 years ago.[13] On the walls of the Arnhem Land cliffs are some motifs in red ochre actually bonded to the rock. Mineralogical examination shows the skin to be a complex silicate mineral.[14] Ion-probe analysis indicated this to consist in some cases of a complex polyhalite, perhaps formed under the colder drier conditions of the last ice age, with salt-laden winds, blowing across the exposed Arafura Plains, and bonding the art on the Arnhem rocks. The motifs show men and women hunting animals, some now extinct; all are bonded beneath a silica sheen.

The concept of the taxon

To understand how Aborigines classified the natural world, it is necessary to combine a working knowledge of natural sciences with skills in linguistics and social anthropology. The enterprise is a co-operative effort between research workers and Aborigines. On the Aboriginal side, some people are especially interested in their own knowledge of the world and how to transmit this to another cultural milieu. Some of the most systematic ethno-biological work carried out in recent years has been in Arnhem Land. Contemporary Arnhem Landers have a high retention of their traditional knowledge and are fluent in their own languages. Some older people are not able to speak English. Many groups still hunt and gather for their food and manufacture many elements of their technology from natural sources.

Let us take as an example the Gidjingarli-speaking people of the Blyth River. In general, Gidjingarli names for plants and animals in their environment correspond to scientific species. Thus there are different names for jabiru, brolga, magpie goose, burdekin duck, grass whistle duck, black duck, pelican, and so on. All these birds form part of the diet. However, many small birds, especially those seen fleetingly in rain forest patches, are given a collective term *badaitja*, the best translation being 'small bird'. *Badaitja* have no economic value. However, some birds that are not part of the normal diet do have proper names. These birds play important roles in totemic song cycles; their habits, or characteristics such as distinctive plumage or song, are depicted on bark or body paintings, or enacted in dance and song.

For the economically most important animals, the Gidjingarli subdivide within the species. Thus in the case of both the agile wallaby (*M. agilis*) and the kangaroo (*M. antilopinus*), the male and female are given separate names. The Gidjingarli know perfectly well that they are of the same biological species. In the case of the barramundi (*Lates calcarifer*), different stages in its life-cycle are given different names. The silvery coloured young fish moving in from the sea at the beginning of the wet season are called *anamutjala,* whereas the older, larger and dark coloured fish speared or trapped on the estuarine wetlands at the end of the wet season are called *djanambal.*[15] Again the Gidjingarli realize they are dealing with the same species; indeed, their knowledge of the life-cycles of this and other estuarine/wetland fish is profound and accurate.

The most systematic investigation of the relationship between Aboriginal taxa and Linnean species was done by Meehan,[16] using the Gidjingarli classification of mollusca as her case study. All molluscs collected, including those from storm beach debris, were identified as belonging to a total of 106 formal Linnean species. Of these, ninety-seven were assigned names by the Gidjingarli who placed them into fifty-four Gidjingarli taxa. In twenty-five cases, a taxon corresponded to a species; in fifteen cases to two species; in eleven cases to three species. There was a general taxon *lugaluga* into which eleven species were lumped — these were all non-edible species that formed part of the beach debris and had been blown up from deep water as dead shells. The relationship between taxa and species can be illustrated by reference to the Arcidae in the table on page 6.

Similar tables can be constructed for the Veneridae and Mytilidae families.[17] In one case a single species, the oyster *Crassostrea amasa,* was assigned to two distinct taxa on the basis of ecological habitats. Oysters that grow on the roots of mangroves are called *an-guldjaraba,* whereas those on ocean-fronting rocky outcrops are *waiyanaka.* The favourite shell fish to eat, and also the one with the greatest role in songs, is the bivalve *Tapes hiantina,* called *diyama.* This is subdivided by the Gidjingarli into two types based on different patterns of decorations on their shells and named after different ducks, the shell patterns reminding the Gidjingarli of plumage patterns.

At a higher level than species, there are some terms referring to classes or sub-classes of animals. Thus fish are all grouped under the general term *djidjidja,* and there is another term for all turtles and tortoises. Among the mollusca and crustacea there are two terms describing their flesh. One is *kaparra* and refers to the flesh of bivalves that have habitats on the open sea

Relationships between nine species of Arcidae and one species of Cucullaeidae and five Gidjingarli shellfish taxa[18]

	Gidjingarli taxa				
Family and species	*ngandipurda*	*an-galidj-awurrigiya*	*gunagulumba*	*gumunka*	*gunamil-amilawa*
Arcidae					
Anadara aliena	x				
Anadara crebricostata	x				
Anadara desparilis	x				
Anadara gubernaculum	x				
Anadara granosa		x			
Mesocibota luana	x				
Arca imbricata			x		
Arca multivillosa			x	x	
Trisidos yongei					x
Cucullaeidae					
Cucullaea labiata	x				

shore. The other is *ngarl* (literally meaning 'tongue'), which refers to the flesh of many animals including bivalves from mangrove or fresh water habitats, all gastropods, crustacea such as crabs and prawns, and some insects such as witchetty grubs. The Gidjingarli make no distinction between birds and mammals, referring to the flesh of both as *mindjak,* meaning meat; though they do have a subdivision into 'bloody' (red) and 'clean' (white) meats. Thus, unlike medieval Europeans, they correctly classify sea mammals, such as dolphins and dugongs, into the same group as the land mammals on the basis that both are *mindjak.*

The Gidjingarli language assigns all objects in the universe to one or other of four noun classes, signified by the prefixes *an, djin, man,* and *gun.* Although the classification is not rigorous, there is a tendency towards an association between *an* and masculinity, *djin* and femininity, *man* and edible plants, and *gun* and non-edible matter. Almost all animals, including fish and shell fish are classified as either *an* or *djin.* While most edible plants are in the *man* group, some are either *an* or *djin.* Many trees are in the *gun* group, as are such things as timber or sticks and branches. However, within this classificatory system there are some interesting anomalies and nuances. For example, a few molluscs are in the *gun* group because of their habitat on rocks at low or subtidal levels or inside rotting tree trunks.

The Gidjingarli see each taxon as an immutable entity, enshrined in the totemic religious system. Many are said to 'have a song', that is, they form part of the great song cycles, which relate them to the other elements of the panoply — land and people. Some taxa have secret ('inside') names used only in ceremonies and usually with restricted access as to their true meaning. This contrast between inner, religious and esoteric on the one hand and outer, secular and practical on the other is a common feature of Gidjingarli thought and practice.

Plants

In recent years, research workers have drawn up plant lists for various areas of Arnhem Land and Cape York, and through the medium of several different

Aboriginal languages.[19] Among the Gidjingarli, Meehan and Jones collated a list of some seventy-five plant taxa, each related to a plant with some useful function either as a food or a raw material, growing in that environment. A similarly sized list, referring to essentially the same species, was made by Altman from Gunwinggu informants living inland some 50 kilometres south-west of the Gidjingarli. Both these environments consist basically of savanna woodland and estuarine/riverine communities with small patches of vine thicket.

Along the escarpment edges of Kakadu, another 100 kilometres to the west, are extensive pockets of floristically complex monsoon forests, which contain a great diversity and number of plant species. The inhabitants speak the Mayiali language and have a corresponding richness of taxonomic vocabulary to describe their environment. In a study carried out recently by the botanist Russell-Smith,[20] four elderly Aboriginal people were able to identify no less than 420 plant species and assign names to them. For each species, there was a detailed knowledge of its season of flowering, its habitat, whether or not parts were edible or poisonous and what could be made from it as a raw material. In several cases, the species have not yet been scientifically described. It must be remembered that botanical knowledge in this region is still at the pioneering stage, with even one of the dominant trees, *Allosyncarpia ternata,* being formally described only in 1979. Yet the Mayiali word for it, *anbinig,* has presumably been in use for centuries at the very least.

There has been a tradition for pioneering botanists to work with Aborigines on the classification and properties of plants ever since the days of Robert Brown; and this process still continues, both at the level of systematics and in the growing field of nutritional studies. Through experimentation over a long period, Aborigines have learnt many of the nutritional and pharmaceutical properties of plants — which ones have poisons to be careful of or to be removed. Systematic nutritional analyses of these food plants result in the documentation of their calorific values, protein content, minerals, vitamins and so on. In some cases there have been surprising results such as the high calorific content of *Pandanus* nuts[21] and the high vitamin C content of *Terminalia ferdinandiana.*[22]

Most edible tubers in northern Australia taste slightly bitter when raw, and some are poisonous in that state. The Gidjingarli describe tubers that are fit to eat, or that are 'sweet', as *man-bala;* those that are potentially edible but bitter as *man-baitjarra;* and those that are poisonous as *man-erra.* The same suffixes can be used to describe a good or calm man as *an-bala,* a fierce one with a strong temper as *an-baitjarra* and an evil man as *an-erra.* Bitter tubers are cooked in earth ovens, which breaks down the toxic compounds (usually oxalates) and makes the vegetable taste 'sweet'. The round or 'cheeky' yam, *Dioscorea bulbifera,* is diced using a hole in the outer whorl of a land snail, soaked and then baked.[23]

A major carbohydrate food source is a bread made from nuts of *Cycas media.* This is the one truly toxic plant utilized by northern Aborigines. In its raw state it has a poison that affects the central nervous system and causes severe vomiting. It also contains cycasin, a natural carcinogen of great potency used in modern cancer research. To remove these toxins, the nuts are de-husked

and left to dry in the sun, ground into a paste, fermented in fresh water ponds and baked. Analysis shows that this removes all of the cycasin.[24]

Many plants were used for their real or imagined pharmacological properties. Some were used internally as infusions for the treatment of gastric complaints and diarrhoea, others as poultices for wounds (e.g. from fighting or from cat-fish spines). Linaments were prepared to be rubbed on the skin to alleviate respiratory troubles, arthritis or burns.[25]

In north-eastern Arnhem Land some fifty-seven medicinal species have been recorded. Almost 200 years ago, a young medical student, François Péron, with the Baudin expedition to Australia and Tasmania, recommended that special notice be taken of the plants used medicinally by the various native people to be encountered, who 'could again show us substances no less precious than quinine; nearer than us to nature, forced by the need to alert all their senses, is it surprising that they have been better served by instinct than we have by our methods, however scholarly they may be?'[26] It is fair to say that pharmacological research on the active ingredients in Australian plants used medically by Aborigines is still in its infancy.

Landscapes and the seasonal cycle

Arnhem Landers have an integrated view of their environment, seeing associations of plants, animals and soil types within the context of a changing seasonal cycle. There are six main seasons,[27] characterized by temperature, rainfall and the direction of the main trade winds, grouped around the concepts of the full wet season, the early dry and late dry.

The Gidjingarli define their environment in terms of named entities, which are similar to the land systems of the CSIRO classification.[28] Thus the *malpi* is the open woodland, dominated by the stringy barks *E. tetrodonta* and *E. miniata,* with understories containing the edible palm *Livistonia humilis* and cycads. Central to each concept are the various foods contained within it — honey from tree trunks, kangaroos, the various nuts and also seasonal markers, such as flowering plants, that indicate the readiness of various foods. Other land units include the *kapal* or estuarine black-soil plains, the *djaranga,* inland fossil Quaternary dunes with their fringing groves of vine thickets, the *madua* or sea beach, and so on.

Over the seasonal cycle, people locate themselves in different places at different times of the year according to a regular pattern. Thus, during the full wet season, people are pinned down on their coast beaches, with the grass tall and green and much of the inland flood plains under water. Then, with the coming of the dry season, more excursions are made inland to the vine thickets to get yams until eventually the plains begin to dry out and water becomes restricted to large swamps with their abundant supplies of swamp plants and magpie geese. Finally, the late dry season is often a period of stress with little water, plant foods hard to find and most animals thin. The budding clouds along the north-west horizon herald the coming monsoon and, as if to mark it, several trees such as *Syzygium* and *Vitex* put out succulent fruits.

The seasonal cycle described here in secular terms is also perceived by the Gidjingarli in a religious context. The winds are the manifestations of the great

creation ancestors. The driving force for human actions is to carry out the crucial ceremonies at the right places and at the right times. During the stress periods of the full wet season, rules of what to eat, how and where to cook food and other prescribed behaviour are strictly adhered to, lest the Dreaming Serpent, asleep in the bends of the river, becomes angry and sends a devastating cyclone to destroy the human transgressors.

Stones and colours

The Gidjingarli have but two true colour terms, namely *gun-gungaltja* meaning light and also bright scarlet; and *gun-gungundja* meaning dark. All the world may be divided between these two terms.[29] They are important elements in classification systems, distinguishing species or life-cycle states of fish, different cloud states, fruits, and the races of man. In addition there are four pigments, namely red ochre, yellow ochre, black charcoal dust, and white pipe-clay. The terms for these may be used to describe other objects, using the device of saying that something has been 'painted' by the relevant pigment. Thus a bird may be described as being 'painted' with red ochre on its chest to distinguish it from another.

In geological terms, 'light' sand dunes are those associated with present-day coastal processes, whereas 'dark' ones are fossil, with well developed soil profiles. Features such as prior streams, or a fossil erosion gully that has cut across the grain of parallel chenier dunes, or a stone outcrop that seems out of place, are all keenly noted. Invariably the explanation is couched in mythical terms, namely, that the feature in question was formed by ancestral beings and that the essence of that creation still exists within it. The same is said of old archaeological sites, such as midden mounds, now located several kilometres inland and radio-carbon dated to 1500 years ago. We were told that these had not been formed by human actions but by the ancestral dingo, *Kula Kula,* as it travelled across the landscape, scraping up mounds of shell where it slept.

Stone tools used for artefacts are also divided on the basis of colour terminology. *Gun-garrema gun-gungaltja,* or light stone, includes sedimentary rocks such as cherts and quartzites and can be flaked for use as knives and spear tips. On the other hand, *gun-garrema gun-gungundja,* or dark stones, are volcanics, the basalts and granites made into axe heads and mortars by grinding. In some parts of Arnhem Land old men still know how to make stone blades at quarries of especially suitable stone. In 1981, at the celebrated quarry of Ngilipitji in eastern Arnhem Land, a small group of Rritharrngu men dug large spherical stones out of the ground and tested them for their suitability for flaking. Then, having prepared the cores, they struck a series of long blades and selected the flattest ones for further edge-trimming to make spear heads (see the film 'Spear in the Stone', directed by Kim McKenzie). In the recent past, before such tools were replaced by iron-tipped 'shovel-nosed' spears, Ngilipitji stone spears were the most prized and feared when used in duels and other combat. They formed a key element in a system of trade that helped to integrate the tribes of eastern Arnhem Land into a single cultural complex. The trade network was sanctioned through its relationship with rituals, including some of the most important secret ceremonies such as the Kunapipi.

At the quarry, the men spoke of the stone growing up in the ground. Only here at Ngilipitji did true 'killing stone' grow. The cross-sections of weathered rinds were compared to that of a kidney, with the best interior stone of pinky-grey silcrete referred to as *djukurr* or 'fat'. An esoteric oblique meaning of this word is power. It is this mystical power derived from supernatural sources integral to the site that gives the Ngilipitji stone blades their stupendous killing force. Once struck, man or beast is doomed.

PART II

Dualism and totemism

> What is that which is eternally and has no becoming, and again what is that which comes to be but is never? The one is comprehensible by thought with the aid of reason, ever changeless; the other opinable by opinion with the aid of reasonless sensation, becoming and perishing, never truly existent. Now all that comes to be must needs be brought into being by some cause . . . Of whatsoever thing then the Artificer, looking ever to the changeless and using that as his model, works out the design and function, all that is so accomplished must needs be fair: but if he looks to that which has come to be, using the created as his model, the work is not so fair.
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> Plato, *Timaeus*

Aborigines make no distinction between religion, philosophy, and science. They have, however, developed a more or less unified and systematic ontology, which can be characterized as dualistic and totemistic. Let us briefly consider these two labels.

Like innumerable other peoples, Aborigines believe that reality comprises two coextensive domains. One is inhabited by living human beings, and knowledge of it is gained through the senses. The other is inhabited by gods, ghosts and demons. These extraordinary beings are normally invisible, though they may be fleetingly glimpsed or encountered. Entry into their domain may be achieved spontaneously through the act of dreaming; conversely, their entry into the domain of mortals may be contrived through the act of ritual. The Dreaming or Dreamtime, as this dimension of reality is often called,[30] is conceived as an ultimate reality, eternal and beyond explanation. The natural and social order in the domain of mortals is a dependent reality. Enlightenment consists in learning the nature of the dependence.

Totemism in its most elementary or vulgar form is a code that uses natural species as symbols to identify and distinguish social groups within a single frame of reference.[31] An example near at hand is the football competition, with its Bears, Tigers, Magpies, Eels and so on. Aboriginal totemism contains this codifying aspect, as well as the sentiments of solidarity that the symbols call forth and on which they crystallize. But it also encompasses a cosmological dimension that links the two domains of the dualistic universe and that cannot be satisfactorily explained as a mere epiphenomenon of social classification or collective consciousness. As conceived by Aborigines, totems are beings of great power who once roamed the earth performing wonderful deeds of creation and who now lie quiescent in focal points of the landscape. Before disappearing, they left behind in the care of men tokens of their being: carved stone or wood, songs, designs to draw on bodies, or bark, or on the ground, and