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The re-enchanted forest

L.J. Christensen
Murdoch University, Australia

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ABSTRACT: Debate about forests has been polarised – and often becomes bitter and divisive. This debate seems intransigent, whichever 'side' is deemed to have the upper hand at any given time. The roots of this problem are even longer and far more tangled than those of our indigenous trees. Frequently, proponents of various positions assume they are speaking a transparent, objective language that unproblematically conveys the capital-T Truth; and are extraordinarily frustrated that others cannot understand the self-evident 'facts'. Yet all of these languages are located in particular disciplinary frameworks such as silviculture, ecology, economics, politics, frameworks that are not always mutually intelligible to each other. Beyond this Babel of different languages lies an even deeper and more fundamental divide in world view. Recognition of the situated and partial knowledge of these truths may offer us a way to move beyond the binary. And reviewing one of the fundamental splits in the western world view – that between science and magic – may allow us to learn how to re-enchant the forest.

For my brother and me, the bush was our first text. In childhood, our knowledge of trees was akin to that of the (possibly apocryphal) Pacific Islanders who had no generic word for tree, but instead named each tree on their island. We did, of course, know 'tree'. We did, of course, know 'gum'. For Australian children, tree and gum are pretty much synonyms anyway. Still, our relationship with trees was personal, magical. We knew our trees as individuals. We played with 'honky nuts' as children. We knew the trees that supplied them in bountiful quantities, but I, at least, had no conception that they were the fruit of the marri.

For a while in late primary school I kept a wooden fruit as a kind of a pet or fetish. Inexplicably, I thought it was from a boab tree, a picture of which had appeared in a grainy black-and-white school magazine, but none of which occur naturally further south than Broome or Purnululu. The grinning split at one end struck me as its snouted mouth, so I sometimes swaddled the other end in various scraps of fabric, and carried it around in my pockets and school case. I clearly remember the attraction this plant/animal held for me, and the comfort to be gained from stroking the velvety texture of its coat. But the name I gave it eluded me, so - feeling somewhat stupid - I rang up my brother to ask if he recalled. He offered me one of those unexpected gifts other people will sometimes bring forth from the storehouse of their memory. "Boaby! Yeh, of course I remember Boaby ... and that bitch of a nun who made you throw it in the incinerator. You cried." Exit magic.

It wasn't until my early twenties, when I was studying at University, that I had the opportunity to go camping in the South-west. Only then did I see, and start to distinguish among, a few of the

more obvious tree species indigenous to Western Australia: Marri - *Eucalyptus calophylla* for the beauty of its leaves; jarrah - *Eucalyptus marginata* for the edging on its leaves; karri - *Eucalyptus diversicolor* for the colour discrepancy between its upper and lower leaf surface (Boland et al. 1992). I added to this tiny stock of knowledge in a haphazard sort of way over the next few years. Then fate intervened, in the unlikely form of a Commonwealth Employment Scheme (it was during the first serious wave of unemployment to break the post-war bubble). After graduating, I was employed under this scheme as an assistant editor for the Forests Department of Western Australia. In 1984 it evolved into the Western Australian Department of Conservation and Land Management (CALM 2004) by amalgamating with the former National Parks Service and the Wildlife Division of the former Department of Fisheries and Wildlife: an uneasy alliance. Enter science.

Although not a native dweller in the lands of science, the long apprenticeship I served in reading and editing technical and scientific research papers has made them familiar terrain. During my time with the Department, my scientific knowledge of trees, shrubs and forest communities increased exponentially. I learnt about overstories and understorey vegetation structures. I came to understand the travelling habits of the *Phytopthora cinnamomi* fungus, then thought to spell the potential death of the jarrah forest. (Jarrah proved more resistant than was first thought, although it is still good for people to be aware of hygiene in forest areas. *Phytopthora,* commonly called dieback - or, erroneously, jarrah dieback – was later understood to pose a far greater threat to the vegetation of the coastal heathlands [Brandis & Batini 1985].) I finally learnt to distinguish between karri and the other huge tree species of the South-west - tingle, both red (*Eucalyptus jacksonii*) and yellow (*Eucalyptus guilfoylei*), rare relicts of a far wetter age. I have yet to see the even rarer Rates tingle (*Eucalyptus brevistylis*) (Boland et al. 1992).

I learnt that marri - the prolific producer of honky nuts - was a bloodwood. Bloodwoods have recently been reclassified into a new genus, so the familiar *Eucalyptus calophylla* now carries the name *Corymbia calophylla*. Marri is also known as redgum, because like all bloodwoods it produces copious quantities of thick, red-amber sap. Foresters observe that the sap renders marri useless as a structural timber. Yet this sap can also be useful to people. Enter economics. Indigenous people used marri sap for gluing (Turner 1986:15). Apiarists have yet another perspective: they find marri's copious quantities of bee-attracting white blossom of great value. Rich, dark, redgum honey is a local staple. Rich, dark jarrah timber has also been a local staple ever since the first Europeans here dubbed it Swan River Mahogany (Mills 1986:6). Jarrah is a forester's delight - tall, straight-grained, termite-resistant, iron-hard: when polished, exquisite. The small cottages of timber workers were made with the unvarnished wood (Fordham 1986:24). Polished jarrah graced the fine houses of local dignitaries and those who profited by the colony's trade. Thousands of tonnes were harvested in the first decades of the Swan River Colony's existence. A significant part of this trade was in jarrah to be used for telegraph poles and mine support structures, as well as railroad sleepers, both in Western Australia and overseas (Crowley 1960:139). Vast amounts of the unpolished wood remain out of sight in South African mines. On some London streets it is still possible to see jarrah paving blocks (Crowley 1960:139).

Since the 1980s it has been clear that jarrah of this quality - from mature forests of two and three hundred year old trees - is a thing of the past (Cribb 1985; CALM 1987). New techniques for milling and seasoning younger jarrah trees have been developed and a greater emphasis has been placed on its use for visible, value-added products such as furniture. At the same time there has been an attempt to raise the amount of plantation timber in the south-west of the State, in share-farming schemes of softwoods (*Pinus pinaster* and *Pinus radiata*) (CALM 1986; Spriggins 1988) and hardwoods (primarily Tasmanian bluegum - *Eucalyptus globules* [Shea & Bartle 1988]). Jarrah is so enduring, it would not surprise me if there came a time when worked-out mineral mines were worked-over once again to recover the increasingly rare and valuable timber. Streets paved with jarrah may well exceed the value of streets paved with gold.

Karri is also a beautiful, straight timber - taller and stronger still than jarrah, and of slightly lighter tone. Up until the mid-fifties at least, karri, too, was used as a structural timber throughout houses. The flooring glory of my own weatherboard worker's cottage is karri boards five inches wide. Beautiful, but stupid. Termites love karri. The adjacent suburb of White Gum Valley (where the

only white gum I know of is one planted in a friend's garden) has long been known as White Ant Valley because it dates from the era of karri floors. Karri is still used in the building trade, but more sensibly confined to roofing structures. Unbelievably, even in strictly economic terms, for many years at least 670 000 tonnes greenweight of mainly karri - but also marri and other species - was chipped and sent to Japan for the manufacture of paper and cardboard containers (accounts vary, see, for example, Thompson & Tracey 1995; Amis, 1998/99:29). Were you ever so blind to its beauty, were you ever so enamoured of profit, it would surely make simple economic sense to use a scarce and expensive timber in high-grade, value-added products such as fine furniture. Foresters know a lot about the biology of karri trees - where they grow best, how they regenerate (Christensen 1992; Underwood & White 1988/89). Conceivably, it is possible to continue to use some part of this resource in a sustainable manner for local building and furniture industries, and by local artisans and craftworkers.

This deadlock between intrinsic and instrumental values can only be broken if the language of economics is modulated by the tongues of other disciplines - not only the sciences of the head, but also the poetries of the heart. And not only the poetries of the heart, but also the politics of the head-and-heart. If open-market remains the only word that's heard, then short-term gain will not be gainsaid. By definition, the swiftest, cheapest means of gutting a resource will prevail until effectively there is no resource left. Such was very nearly the case with Western Australian sandalwood (*Santalum spicatum*). Loneragan (1990) gives a full account of the history of this small, unspectacular, scrappy tree and offers the following information. Sandalwood was once common in the Wheatbelt and remains in scattered patches throughout the semi-arid regions from just north of Carnarvon to just north of Albany, stretching east to the goldfields. India and China traditionally imported East Indian sandalwood (*Santalum album*) from Indonesia and the Spice Islands, but by the middle of the nineteenth century, disease and exploitation had taken their toll on that resource. It was a great opportunity for local barons, who made spectacular profits on Western Australian sandalwood. Four tons of sandalwood were shipped from Fremantle to Ceylon (Sri Lanka) in 1845. Less than three years later, sandalwood export had become the Colony's primary industry. For example, sandalwood exports brought in £65 800 in 1896 - a great deal more than the earnings from all the other timber exports combined.

Sandalwood became known as wooden gold - a telling phrase. The gold standard, above which thou shalt have no other. Open market conditions prevailed with predictable results. The Wheatbelt was stripped of harvestable sandalwood. The profit was not passed on to the sandalwood pullers, who worked hard in difficult conditions for very meagre rewards. Nor did much of it accrue to the long-term benefit of the State. In those early years it was mainly foresters such as C.E. Lane Poole who resisted the general trend and fought to protect native trees against such unregulated profiteering. In fact, were it not for the concluding line, the following quote might be taken for an excerpt from current conservation literature:

> 76. As is well-known, Sandalwood has been largely exported from Western Australia for many years, and has, in fact, been cut and grubbed up in a most ruthless manner; many of our farmers having made large sums of money from the Sandalwood trade.
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> 77. Of recent years the market has been glutted, and the tree given a chance to regenerate itself; but as prices are expected to increase, the same wanton destruction is again beginning. It is regrettable, therefore, that earlier steps were not taken to prevent the ruthless destruction of this tree, which has been such an important factor in the timber industry of this Colony (Woods and Forests Department 1901:x).

Although the Sandalwood Act was passed in 1929 (Kealley 1991, 26-29), the same boom and bust cycles of the open market meant that up until the 1950s the sandalwood industry continued to exploit the resource in the same manner, with little thought to its conservation, either as a resource or as a species. Due credit must be given to both the Bureau of Agriculture and The Woods and Forests Department, both of which had made attempts at conservation as early as the 1890s, by

establishing experimental sandalwood plantings in Pingelly and Meckering, respectively (Loneragan 1990, 9). Unfortunately, these trials showed that sandalwood regeneration is a very chancy business - and most of these plantings were lost in the first summer. Loneragan's (1990) and Kealley's (1991) accounts of sandalwood silviculture reveal that natural regeneration of sandalwood is particularly slow, and subject to vagaries of climate - several years of above average rainfall are needed for successful germination and survival of seedlings. The average survival rate of undisturbed sandalwood is only 1-5 per cent, and, with a baseline figure like that, it doesn't take much to tip the balance against regeneration. Unlike many local plants, sandalwood cannot tolerate fire and will seldom regrow from coppice shoots. Add to this its vulnerability to the severe grazing pressure from introduced herbivores and it becomes evident why the chances are zero of sandalwood naturally regenerating in its former range over 13 million hectares of the Wheatbelt. Since the discovery in 1921 that sandalwood is dependent on a variety of other species because it is a root parasite (and numbers of research trials carried out in the 1970s and '80s), regeneration of sandalwood in conservation reserves has improved. Outside these reserves, it is still poor, although the industry has been regulated since the 1950s. Millions of people have had their meditations sweetened by the perfume of Western Australian sandalwood. I wish that more of us might meditate on the lessons that sandalwood can teach about the impact of free market policies.

Sadly, that is unlikely to happen. Although this tree was so major a part of our economic past, knowledge of sandalwood is no longer part of public discourse. The majority of Western Australians if asked to source the sandalwood plant would most likely guess the Spice Islands or India. While there remains ever-dwindling commercial quantities of karri, however, the debate about its use stays current – despite the Gallop Labor government's decision to phase out the cutting of old growth forests (CALM 2004b; Schultz 2004). Currently, the local communities that were primarily identified with the timber industry are feeling severely disenfranchised by the decision. But feelings have often run high about the woodchipping of old growth forest, from many different perspectives. So much so, that the conflict inspired a singular act of violent resistance on July 19th, 1976, when John Robert Chester and Michael David Haabjoern attempted to blow up the woodchip terminal in Bunbury. (Surprisingly, I was able to locate very few written references to this singular event in Western Australian history, apart from contemporary media accounts in the *West Australian* 1976 and the *South West Times* 1976; and brief mentions in Barker & Laurie 1992 and Pinto & Wardlow 2004).

Chester and Haabjoern's actions resulted in them being sentenced to seven years in prison. After the Crown appealed, their minimum term of ten months was upped to three-and-a-half years. Enter politics. It was not in the forest, but on the campus that I had begun to be aware for the first time of the tensions generated by conflicting views about the nature and purpose of trees and forests. In the era just after the Vietnam war, the university was clamorous with four-letter acronyms starting with 'C'. *Campaign Against Nuclear Energy, Campaign Against Racial Exploitation*. It was the late 1970s, the heyday of the *Campaign to Save Native Forests* (CSNF), formed in mid-1975, followed closely by the *South West Forests Defence Foundation* in December 1975.

Chester and Haabjoern's privately conceived and executed actions may have appealed to the wilder passions of the ungoverned heart. After an appeal by the prosecution, the pair were treated with some severity by the judiciary, but the media were surprising sympathetic (Barker & Laurie 1992, 317). Nonetheless, most conservation organisations disassociated themselves from the political futility and ethical emptiness of violent protest. The events of July 1976 crystallised the CSNF's interest in non-violent, direct action. Initially, it was the *Campaign Against Nuclear Energy* that invited Quaker activist, Laurie Shane, to begin non-violent, direct action training programs in Perth. According to Hutchison (1997, pers. comm.), the CSNF - after some internal debate - decided that those members who wished to could work in this manner. Trained CSNF members then initiated a civil disobedience campaign. A dozen or so protesters (including Hutchison), having notified all relevant authorities of their intentions, began a sit-in at Wagerup - the proposed site of Alcoa Refinery - in the early months of 1978. Along with many others, I camped outside the fenceline, in support.

In 1961 Alcoa had been granted dominion over 12 619 square kilometres - including more than seven thousand square kilometres of the northern jarrah forest - in order to mine for bauxite (ALCOA 1998, 1.4). Over the years since then Alcoa has taken some pains to ensure they clean up after themselves - and even greater pains to gain a public reputation as being conservation-conscious and 'a good corporate citizen'. Yet there remains considerable scepticism about whether replanted mine pits can ever replace the complex ecosystem they have disrupted (Doherty 1998, 32-36; Thompson & Thompson 2004). In the short term, however, there is little probability of Alcoa being displaced. Bauxite is big business - estimates for exports in 1999 were 2.19 million tonnes per annum (ALCOA 1998 3.8). A handful of protesters were hardly likely to upset such a Goliath.

Still the Wagerup weekend was a significant milestone in non-violent direct action conservation in this State. Apart from the Farrington Road dispute (Jennings 1985a, 1985b) non-violent occupation/confrontation campaigns were less evident in the conservation movement during the eighties, but the approach underwent a revival in the closing decade of the century (for example, in the long-term blockade of Giblett forest block from May to December of 1997, carried out under the auspices of the *Western Australian Forest Alliance*). WAFA (2004) is an umbrella organisation comprised of 20 or so subgroups with varying degrees of political activity. These revenants of 1970s activism had a few 1990s spins. They took advantage of email networks for mobilisation, and communicated with other supporters and the media via a mobile phone from the protester's platform, 20 m up a karri tree in Giblett forest block (Seed 1996; Friends of Giblett 1998), as well as the passive resister's *piece de resistance,* the 'dragon car' (Barrass 1999).

Most fascinating was the beginning of an unlooked-for alliance among some relatively conservative groups and individuals (McDonald 1998) and the more traditionally rainbow-hued protesters, whose affiliations run from feral through neo-hippy to millennial political activist. The head of the Small Business Association, Phillip Achurch, addressed a large anti-logging protest I attended in Perth, and was vocal in the media about his views. Even more amazingly, supporters emerged from the traditionally apolitical world of sport. Several mainstream sporting personalities spent time as platform sitters during the blockade. First Craig Turley, a former footballer with the West Coast Eagles, and then Luc Longley, a basketballer formerly with the Perth Wildcats, who later had a ten year career with the American NBA. Their efforts might have been dismissed under the aberration clause allowed to youthful idealism.

Not so those of Mick Malthouse, middle-aged and (at the time) coach of the West Coast Eagles football team (Laurie 1998). On June 3rd 1998 he went public on Channel 9, condemning the logging of old growth forests. He was variously characterised in the media as 'dour', 'taciturn' and (most damning of all!) 'eastern-Stater', not at all a man to demonstrate much emotion, even about the game that was his life's blood. Yet he felt so strongly about the logging of old growth forests that rather than be quiet he acknowledged he was prepared to lose some of his politician friends, even to lose his job.

Predictably, Mick Malthouse was both feted and slated (Laurie 1998; Miller 1998; Miller and Burns 1998; Rechichi 1998) for his public stand, but he gained more than media attention - he managed to inspire a group of similarly high-profile individuals across the political spectrum, many with very little else in common, to join forces and mobilise against the continuation of logging old growth forest provided for in the draft agreement (Armstrong 1999; Laurie 1998; Malpeli 1998). Thus, new voices joined the debate. Liz Davenport, Dame Rachel Cleland, Shirley de la Hunty were among the more famous names to offer consistent public support to the campaign (Malpeli 1998). It even spawned a new movement 'Grassroots in Suits' (Hodge 2000) from the original 'Men and Women in Suits' who met outside the Premier's office and simultaneously phoned him on their mobile phones to register their protest (Irving 1998a). All this cut across traditional party lines and alliances and one outcome was a new political group (Liberals for Forests 2004).

The opponents of logging old growth forests marshal many different kinds of arguments for preserving such forests. Some talk the language of science and note that it takes trees more than one hundred years to develop the kinds of hollows necessary for nesting birds and possums; they point out the loss of diversity of plants, and hence animals, in the simplified understorey of artificially regenerated timber 'forests'; they applaud the provision of roads, rivers and stream vegetation

reserves, but object to the inclusion of these tatty remnants in the total figures of reserved old growth forest. Others talk the language of politics. In early December 1998, the Environmental Protection Authority released a report which charged the Department of Conservation and Land Management with failure to meet 25 out of 37 environmental conditions set in December 1992 by the then environment minister, Kevin Minson (EPA 1998; CALM 1998; Irving 1998b & 1998c; Pryer 1999). A number of these were trivial or incomplete omissions, but one in particular was considered a serious breach of CALM's obligations to notify the relevant people about any substantial changes to its logging limits. The EPA also gave official voice to the long-standing claim of conservationists that it is untenable to have a single government department charged with a duty to manage timber production at the same time as managing the conservation of old growth forests. The politics were so bitterly fought that the uneasy alliance of CALM began falling apart, and the forest production function was officially separated from the newly named Department of Conservation in November 1999 (CALM 2004).

A substantial percentage of those opposed to old growth logging do not hesitate to use the language of economics. It is rumoured that the apiarists, for example, have complete records of forest honey production dating from the 1880s. As the area of old growth forest shrinks, honey production and their livelihood decline proportionately. Accordingly, the apiarists tender evidence that the total area of forest has reduced far more than the official figures indicate. Other economically-minded observers assert that the uniqueness of old growth forests is worth far more to our State in terms of tourist dollars than it currently affords in employment and export earnings, and that - carefully managed - tourism can be a *genuinely* sustainable industry (de Blas 2004).

And, amidst this Babel of claims and counter-claims, some are unafraid to talk the languages of the heart. In a society where economic rationalism is the power discourse, it takes courage to make a plea for the indefinable, economically unjustifiable, intrinsic value of old growth forests. Arguments about the intrinsic value of old growth forests - whether framed in terms of aesthetic, magical, or even spiritual joys - do not normally penetrate beyond the ears of foresters or timber workers. Not because they are deaf, nor necessarily because they are blind to beauty, but because they speak a different language, a language comprised of equal parts science, economics and bureaucracy. Understandably they take exception to overly romantic claims that betray a complete ignorance of silviculture - the biological laws that govern the growth of individual trees and forest as biological units. Mick Malthouse was criticised for such inaccuracy. Foresters are not completely ignorant of ecology. They cannot be, because they have a stake in maintaining forests in some form: that is their profession. It is not unreasonable for them to expect some level of scientific literacy in the arguments of their opponents. They have a right to claim that were it not for early foresters such as C.E. Lane Poole, there would be precious little old growth forest to be arguing about - the lot would have been cleared for agriculture. Farmers generally have to eliminate forests or scrub in order to claim a place in the landscape.

The labour of both foresters and farmers has undoubtedly brought economic benefits to Western Australia. Yet economics can hardly be the sole measure of a society's health. (After the demise of the Asian markets in 1998, the woodchip lobby did not even have economics on its side.) However much economists like to insist that everything is reducible to dollar value in the open market, the Australian community begs to differ. Data collected from five States over the last ten years by the Australian Research Centre for Water in Society has shown that across every social grouping, Australian people consistently reject this economically rationalist view of the world (Syme, Nancarrow & McCreddin, 1999). In doing so, many comment precisely and poetically on notions such as the intrinsic value of natural resources and community good. To wit: "You can't buy a river" (Nancarrow 1998, pers. comm.). The ARCWIS research was centred on the role of rivers and water in society, but its findings can reasonably be extrapolated to other natural resource management issues, such as those involved in the debate about logging old growth forests. You may be able to buy timber, but can't buy a forest!

In ecological terms alone, an interwoven forest ecosystem cannot, must not, be conflated with a tree plantation. A natural ecosystem has a wholeness, an integrity which embraces the dead and dying as part of the life cycle. A tree plantation may be hygienically purged of 'useless' old trees, it

may be convenient for planning cycles of planting and harvesting, it may shelter a small range of other plant and animal species in a simplified kind of ecosystem, it may certainly be preferable to other crops in some agricultural landscapes. But a tree plantation is basically an economic phenomenon, of reduced biological complexity and reduced capacity for spiritual solace. Looked at another way, the magic goes. I know they have not been on speaking terms since the Enlightenment, but would science really be impossibly compromised by acknowledging that there are some truths that can only be spoken or heard in the language of its old enemy, magic; some truths that simply cannot be voiced by science alone? When I write of 'magic' I refer to a devotional mode of knowledge which understands all things as vibrantly interconnected and which holds special things as talismans offering insight and access into the power of the animated cosmos. I talk of immanence, not transcendence. The ancient power struggle between magic and science was simply another version of the competing claims of faith and scepticism, or romance and classicism, an ongoing theme in western history. Looked at closely, nothing is ever so neatly divided. The pernicious effects of this illusory binary surround us, and it is long past time we learnt to resist its seduction.

To allow the possibility of some value in magic is not to fall immediately from the reputed grace of objectivity. It does not require the wholesale acceptance of superstition, irrationality and new-age kitsch, predictably burgeoning in this time of millennial tension. It does, however, invite us to remember that magic has a long history, discipline and intellectual tradition, although one that has been eclipsed in the West. It does challenge the easy assumption that magic is simply "bad science" (Thomas 1971, 800). The interrelationships among science, religion, poetry and magic are extraordinarily complex (see for example Midgley 2001; Dear 2001; Hunter 1995; Thomas 1971) All very interesting, but what on earth has an old power struggle, from which science emerged as the undisputed winner three centuries ago, got to do with forestry, agriculture and ecological disruption in twenty-first century postcolonial Australia?

Consider, first of all, that the original scientific revolution was based on a mechanistic conception of the universe. Within this worldview, everything is subject to rational, natural laws. Accordingly, it is possible for humans to discover and manipulate these laws - and, eventually, gain total control of their environment. Thus the mission of dominion over plants and animals (and peoples not chosen by God), inherited from the Judeo-Christian tradition, was reinvented during the late sixteenth and seventeenth century in more materialistic - sometimes savagely gendered - terms (Midgley 2001, 41-46). From that time to ours the dominant western response to nature has been less and less graced by any vestiges of stewardship or even moderated by the fear of accountability in a hereafter. This revolution, combined with the rise of capitalism, fuelled some spectacular human achievements. At the same time, its premises also underpinned the entire colonial endeavour and exploitation of the resources of the non-human natural world at an unprecedented scale and rate. Science meanwhile has travelled far beyond mechanistic conceptualisations of the physical world, in some cases into realms that do not seem far removed from the visualisations of mystic thinkers (see, for example Talbot 1993). Yet the seductive illusion of total control that originated with the mechanistic, materialistic philosophy of the original scientific revolution continues to permeate our thinking, with dangerous consequences.

Conversely, if magic, romance (or religion for that matter) is in ascendancy to the exclusion of impartiality and rationality that, too, has dangerous consequences. Superstition, ignorance and persecution are the well-documented and inglorious aspects of its long history. Yet the same charges can be made of many enterprises carried out under the banners of science and empire. In Australia, the land and the peoples carry the scars of such enterprises. Achieving reconciliation with the land and the peoples of this place will be possible only if we can look again at the assumptions that underpin our society: admit the limitations in that which we value most and acknowledge the possibility of some value in that which is currently considered valueless.

According to Thomas (1971, 771), "The triumph of the mechanical philosophy meant the end of the animistic conception of the universe which had constituted the basic rationale for magical thinking." In this way the world was declared spiritually dead, long before God was consigned to the same fate. Thus we managed, more or less successfully, to lose our fear of all those things that go bump in the forest at night. Alas, we also tended to lose any sense of humility in relation to the

non-human natural world, any sense of respect for its innate power, any wonder at its enchantment, any duty of care. A re-valuing of these qualities is long overdue in western culture. This hardly implies a reversion to the particular orthodoxies of magic or religion we grew out of so long ago. Rather, it requires a re-appraisal of the role of magic, or spirituality, or imagination in the integrity of the human psyche; and the flow-on effects in terms of the integrity of the world in which we live.

In some respects magic may be bad science (*science,* itself, is at times 'bad science'), yet very often it may be good psychology. Carl Jung (1968) recognised that the true nature of magic's alchemical project was symbolic, not material. There is a direct and material relationship between the level of psychic integrity of the individuals within a society and the health of the rest of the non-human natural world. In turn, the health of the non-human natural world has direct and indirect effects on human health, physically as well as mentally and spiritually. In late 1998, another traditionally conservative group - physicians - took the unusual action of placing a full page advertisement in *The West Australian* calling for an end to logging in old growth forests. They, too, were accused of speaking from ignorance and misusing their social position in taking such a public stand (Rechichi 1999). These criticisms were countered by their spokesperson, Dr Paul Wheatley. According to Wheatley, "Doctors are qualified to speak about the issue because they [see] a link between an unhealthy environment and sick patients." (quoted in Rechichi 1999).

In these matters we could learn a lot from the indigenous people of Australia, who have had far longer to evolve their culture in the context of this continent. Few people would deny that Aborigines, like all peoples, have had some impact on the rest of the non-human natural world here. Scientist and author, Tim Flannery (1994), for example, puts forward the somewhat controversial claim that the arrival of Aboriginal people on this continent was a major factor in the extinction of the mega-fauna. Whatever the political and scientific debates about this claim, Flannery also acknowledges that over thousands of years the Aboriginal people learned to create a lifestyle which ensured that the health of the land and themselves could be reasonably sustained. The notion of a wholescale conversion of current Australian society to an Aboriginal lifestyle is patently ridiculous. Equally, the appropriation and marketing of surface aspects of indigenous culture is patently offensive. Without falling into either extreme, it must certainly be possible to learn something from the fundamental orientation of Australia's indigenous culture - the core understanding that the spiritually living land animates the people that dwell on the land. The holistic awareness that economics of survival, science and spirituality are intricately interwoven and indivisible. The profound respect for the glorious immanence which can empower land and people to co-create each other, if we so choose. This orientation has its corollary in western culture: magic. If we can clear away the stereotypes of animism, superstition, primitivism that muddy the surface might not Australians learn to drink from the clear waters of a spiritually re-animated land? If we can recognise that, at some fundamental level, cultures choose their own reality - and that imagination is the prime agent of conscious choice - might not we learn to re-enchant the forest?

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