# MONASH UNIKVERSITY FACULTY OF BUSINESS AND ECONOMICS

## STRAIGHT LINES IN NATURE: RAINFOREST TOURISM AND FOREST VIEWING CONSTRUCTIONS

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## STRAIGHT LINES IN NATURE: RAINFOREST TOURISM AND FOREST VIEWING CONSTRUCTIONS

The 1980s and 1990s have seen a great increase in public awareness and appreciation of rainforests, resulting in increased tourist visitation to rainforests in Eastern Australia. To cater for these increased numbers and the growing expectations of visitors, public land managers have developed a range of what I will term 'rainforest viewing constructions' to enhance the visitor experience. These range from interpretative walking tracks with either fixed signage and displays or printed guides to more complex and expensive elevated walkways and platforms.

The increased interest in rainforests is part of the greater interest in modern tourists in using their holidays to learn and expand their knowledge of the world. Tourists are no longer only interested in sand and surf, they are more likely to want to explore and to develop a greater understanding of different cultures and physical environments. This rise of knowledge-based tourism is manifested in the increased importance of the 'eco-tourist' and 'cultural-tourist'. As defined in Australia's National ecotourism strategy, 'Ecotourism is nature-based tourism that involves education and interpretation of the natural environment' (Australia, Department of Tourism, 1994: 19).

The increased interest in and controversy regarding rainforests worldwide have made Australian rainforests especially attractive to tourists. They are aware that these are special complex eco-systems, containing an amazingly range of flora and fauna, are relatively rare and under tremendous threat from human activity. Indeed, such is the value of rainforests and the dangers they face, that they have become a worldwide symbol of the environmental movement. For many tourists, visiting a rainforest is exotic and satisfying, a special rare experience, for some a pilgrimage.

For the managers of rainforests increased tourist numbers have created a series of conundrums. First is what has been termed the 'paradox of managing heritage' (Hall and McArthur: 1996, 3-4), that is how to balance providing access and a satisfying experience with protection of the rainforest environment.

Second, providing useful information for knowledge-hungry tourists is often difficult. Scientific explanations of rainforests are extremely complex, Australia contains six different types and even the definition of what constitutes a rainforest is the subject of a great controversy. How can managers impart this knowledge without making it alienating by either being too complicated or too simple? Rainforest managers having to juggle the arguments of the competing and conflicting interest groups in the conservation debate further compound the problem. Which view is the right one? Whichever position is taken, some group is likely to disagree and complain. Taking a non-confrontationist position may just lead to bland statements which are just as unsatisfying.

Third, the establishment and maintenance of viewing constructions and interpretative facilities is expensive. Much depends on continued public interest and the impact of competing attractions. Private tour operators, it has been argued, are proving more successful than public land managers at providing satisfying interpretation and experiences for visitors and at increasing revenue as a result (Hundloe: 1996; Hall and McArthur: 1996, 88-90). Most public land managers in Australia are now adopting a user pays philosophy and some are encouraging private operators in order to reduce costs. Are expensive viewing constructions the spearhead of this movement towards commercialisation? Do they by the size of the capital involved demand increased commercialisation of the environment?

Fourth, tourists value an authentic experience, but authenticity may take two forms. The first may be subjective, that is the tourist feels enriched by visiting a seemingly unspoilt natural setting which contrasts to the problems and alienation of the modern world. Certainly many visitors see rainforests in exactly that light. The second view of authenticity is that the experience must be objectively true, that is the rainforest is really a rainforest (Selwyn, 1996: 6-7). For rainforest managers there is a delicate balancing act between enhancing the experiences and satisfaction of tourists whilst avoiding impressions of artificiality and commercialism.

The purpose of this article is to consider the issues which arise from increased tourist visitation to rainforests and the resulting expansion of viewing constructions. The focus is on publicly managed rainforests and in particular six public rainforest attractions in Queensland, NSW and Victoria. A broad comparative approach has been taken, as typically the scanty literature on this topic has tended to focus on case studies of individual sites or regional clusters. In contrast to such case study approaches, which may be confused by local issues, the comparative approach seeks to identify broader issues and trends.

The article is divided into three sections. The first describes the six attractions under consideration and their main competitors. The second considers how viewing constructions are used to educate knowledge-hungry tourists about complex rainforest issues. The third considers how viewing constructions may affect the viewing experience and how such constructions may be improved.

## THE RAINFOREST VIEWING CONSTRUCTIONS

Six rainforest attractions with viewing constructions are considered for this study and were visited between 1995 and 1997. One is a simple path with interpretative signage and is included as a representative of that common type of simple and inexpensive rainforest viewing construction. The other five are constructions designed to elevate the visitor and to present an improved view of the rainforest. The nature of rainforests, with their typical lushness, crowding of vegetation and dense canopy particularly lends itself to such elevation.

While all of these constructions may be seen as examples of 'hardening' - providing facilities to both protect the environment at popular sites and to concentrate visitors and damage at those sites - the primary purpose of these constructions is to provide an improved viewing for visitors. These elevated constructions are substantially more capital-intensive and expensive than simple tracks. Accordingly they have been heavily marketed by their public agency managers and presented as flagship attractions within their regions. Three have staffed visitor centres, two with commercial shops. Only one has an admission charge. The six sites are:

Curtain Fig Tree, Atherton Tableland, Northern Queensland. The aerial roots of a strangler fig tree form a fifteen metre high curtain of vegetation. This single tree is the main attraction, dominating the surrounding regrowth Tropical Rainforest. The site has been popular since the turn of the century. Recently built boardwalks guide visitors fully around the tree and channel them up a slight rise for the best viewing and photography spot. Interpretative signs and diagrams explain the slow and complex evolution of the strangler fig and its victim. Not staffed.

Malanda, Atherton Tableland, Northern Queensland. A circular-walking track runs through Tropical Rainforest adjacent to the Waterfall Park and swimming pool. The walk takes about 30 minutes and is a simple dirt path. Some 50 varieties of trees are labelled. Not staffed.

Skywalk, Dorrigo National Park, Dorrigo Plateau, Northern NSW. Located on the plateau escarpment, the pier-like Skywalk extends over a steeply sloping Sub-Tropical Rainforest canopy. The skywalk also provides excellent views of the surrounding forest and the Pacific Ocean. It is at the entrance to the park, adjoining facilities include restaurant, shop and visitor centre/ theatrette. A walking track includes a number of elevated walkways designed to highlight particular features of the rainforest.

Minnamurra Rainforest, Budderoo National Park, near Kiama, Southern NSW. A 1.6 kilometre track winds through a rainforest gully up to a waterfall. There are extensive boardwalks and good views of the lower canopy are obtained from viewing platforms as the track climbs a steep side of the gully. The first third of the track is promoted as suitable for wheelchairs. Facilities include a shop, café and conference venue. There is an entry charge of \$7.50 per car.

Bulga National Park, Strzelecki Ranges, Gippsland, Victoria. A 50 metre long suspension bridge spans a steep gully of Myrtle Beech (Cold Temperate) Rainforest. The surrounding walking tracks are simple, but do contain interpretative signage. The gully was originally a picnic site in the late nineteenth

century and it was declared a reserve in 1909 and a formal National Park in 1940. The suspension bridge was built in 1938 and was intended purely for the convenience of visitors and not for road transport. In 1990 a visitor's centre staffed by volunteers from a 'Friends Group' was opened at the entrance to the park. The site is one of the oldest rainforest National Parks in the world and probably has the oldest rainforest viewing construction.

Maits Rest Rainforest Walk, Otways National Park, Great Ocean Rd near Apollo Bay, Victoria. Opened in 1993, this 45 minute walking track traverses a pocket of Myrtle Beech (Cold Temperate) Rainforest. While some of its boardwalks are probably for hardening, it includes a viewing platform for a giant Myrtle Beech and two of the bridges over creeks elevate the visitor into the canopy. Not staffed. Its carpark and entrance are straight off the popular Great Ocean Road. Unlike the other five sites, this walk was not an upgrading of an established picnic site.

The six sites are designed to be visited for between 15 minutes to one hour. All but one are easily reached by sealed roads (most important for rental vehicles). The exception is Bulga, which is sealed to within three kilometres of the visitor's centre. All have car parks within 100 metres of the commencement of the rainforest constructions. The key parts of all the sites are accessible by wheelchairs or prams. These are short experiences, aimed at a broad market, not requiring any special equipment or clothing and in a relatively safe environment.

## Competitors

Visitors wishing to view rainforests have a range of choices in Australia and these form direct competitors for the rainforest attractions considered here. Probably the most serious competitors are the Botanic Gardens of the capital cities. These major tourist attractions have recently invested heavily in creating major rainforest exhibits. Indeed rainforest sections have been amongst the most popular features of these gardens for over one hundred years (Seddon: 1997, 91). Excellent rainforest viewing constructions are to be found at Botanic Gardens in Canberra, Adelaide, Sydney and Melbourne. These manufactured rainforests are only possible through technology, particularly sophisticated watering systems and in Adelaide's case an impressive modernistic greenhouse creates built during the Bicentenary, which controls the micro-climate. These rainforest constructions are massive investments, only economically viable through high visitor traffic and corporate sponsorship.

The success of the urban rainforest constructions has spawned plans for more, which will be even more technologically advanced. The Melbourne Royal Botanic Gardens has embarked on the redevelopment of its Cranbourne site (on the south-eastern suburban fringe). With a planned opening in 2003 it will feature an indoor rainforest attraction combining real plants, realistic models and various illusionary effects and simulations. These could include simulated bushfires and life-like robot animals. The new Museum of Victoria in Melbourne will feature a Gallery of Life highlighting Victoria's cool temperate forests. This artificial forest display will include living Mountain Ash (eucalyptus regnans) specimens.

The route is 7.5 kilometres long, with two stops and each cable-car carries only six people. Its promoters claim it will, 'provide a high quality rainforest experience almost without impacts', be, 'the first opportunity in the world for ordinary people to experience the rainforest canopy at close quarters', and it will, 'provide a contact with rain forest [sic] that does less harm than walking through the forest' (Chapman: 1996, 135-6). Certainly it will be a major competitor of the existing rainforest attractions around Cairns and the Atherton Tableland and if financially successful may lead to imitators in other states. Other private competitors include a wide range of accommodation providers, such as O'Reilly's Rainforest Guesthouse, who have built elevated rainforest viewing walkways and platforms and feeding trays for birds and marsupials as part of their complexes.

#### **EDUCATION**

Recent research has indicated that increasingly tourists are interested in learning about what they are seeing. This is especially so of the, 'eco-tourist' (who may be classed as soft or hard, depending on the amount and quality of information sought). If visitors come to rainforest attractions to learn about rainforests (or to add to the stock of knowledge they already have), then how successful are the rainforest viewing constructions with their elevated platforms and interpretive signage in providing that educational experience?

In measuring educational performance, the managers' often-used tool of the satisfaction survey is likely to be of little value. Visiting a rainforest is such a rare and special event for most tourists that they are always likely to indicate they are satisfied. They may be satisfied, but have they learnt much? And has the expense of the viewing constructions allowed them to significantly learn more than if those constructions had not been built?

Asking visitors whether they learned from the experience is likely to lead to the same sort of result as most satisfaction surveys, a strong yes vote, which is probably of little value. Ideally quizzing visitors as to what they know about rainforests before and after visiting sites would provide a useful measure of the educational content and its effectiveness. However, extensive testing would be expensive and might unduly test the patience of visitors.

A third approach is to objectively consider the information on offer through interpretative signs and its educational value. Are the major issues covered? Is information presented as concrete 'fact' or are there allowances for evolution of thinking and theories about rainforests? Are competing views and debates allowed for? Is there enough information, rainforest are not simple eco-systems, are attractions falling into a trap of trying to explain them too simply?

Information about Australian rainforests can be broken up into a number of topics. My view is that the following nine topics are crucial to understanding rainforests. For an ideal truly educational experience, a visitor should be exposed to all nine topics. They are:

## 1. What is a rainforest?

Not a simple question at all. There is a tremendous and confusing difference between scientific definitions of rainforest and popular conceptions. The tourist may see any high-rainfall, lush, cool forest with palms or ferns as rainforest, the botanist will only accept it if most of the trees (usually 95%) are able to reproduce under a canopy (which eucalypts cannot do). Even botanists have found their definitions narrowed due to government support for logging and wood-chipping (Cameron, 1992: 14-5). Clearfelling a eucalypt forest sounds more acceptable than destroying a rainforest, yet the two forests may be very closely related.

#### 2. Rainforest types.

Five types of rainforest are found in Eastern Australia:

- Tropical
- Sub-Tropical
- Warm Temperate
- Cold Temperate
- Dry Rainforest

With perhaps eucalypt forest mixed with a Rainforest understory being considered the sixth. The differences between the types are easily explained (this is often very well done by the Botanic Gardens in their artificial rainforests).

## 3. Aborigines and rainforests.

Before European settlement the rainforests were extensively used by Aborigines for food and some rainforest patches were deliberately preserved. In the last ten years there has been an increased interest in 'bush tucker'.

## 4. European settlement.

There is a major ongoing debate about how managers of natural sites and parks should handle European settlement. Do they present natural areas as untouched wilderness or do they try to preserve and interpret remnants of settlement (Griffiths: 1996, 255-277)? Agricultural settlement of rainforests reached a peak between 1880 and 1920. In some instances environmental and transport difficulties led to the abandonment of settlement and to regrowth of the forests (Frost: 1997 and 1999). The Curtain Fig Tree, Minnamurra and Bulga sites were preserved by early settlers as picnic sites. Bulga is surrounded by forest regrowth on failed farmland.

## 5. Threats today.

The major threats are from clearfelling for timber and wood chipping. Other threats include fire, clearance for agriculture, disease, pests and weeds, climate change and poorly managed visitors. Mixed eucalypt/ rainforest vegetation is under particular threat due to modern silviculture systems and may within 70 years only be found in National Parks and water catchments (Kirkpatrick: 1994, p. 58).

## 6. Plant/ Tree varieties

Tropical Rainforest is characterised by enormous variety of species, as one heads down the climatic scale variety diminishes, so that Cold Temperate Rainforest may be dominated by only two or three species. Nonetheless, all six sites have a range of species, some in hundreds and some as individual specimens and these should be identified.

## 7. Animals/ Birds/ Insects.

A wide range of animals, birds and insects are endemic, though unfortunately many are nocturnal. High diversity levels (in the warmer rainforests) and rarity of some species contribute to the widely held view that rainforests are special places. During visits a tree kangaroo was sighted in the Curtain Fig Tree and lyrebirds at Bulga.

## 8. Growing conditions.

Rainforests have some distinctive characteristics, these include the canopy (which may be multilayered), responses to disturbances and the nutrient cycle. Some rainforest types have features such as buttressed roots, epithytes and broad species diversity.

## 9. Fragility/resilience.

Rainforests are generally seen as fragile and easily disturbed. Over the last million years the area of rainforest in Australia has significantly decreased due to climate change and human activities. However, given the right circumstances rainforests can be invasive. Archaeological research has shown that the rainforests of south-west Tasmania are less than 20,000 years old. Some writers have argued that some rainforests have sprung up in the last 200 years due to European settlement curbing traditional Aboriginal burning practices (Rolls: 1994, 23-4 and Flannery: 1994, 218-9). It is likely that much of the wet sclerophyll forests in National Parks will gradually change to rainforest over the next 300 years (Kirkpatrick: 1994, 58).

While these nine topics were developed for rainforests, they could be also applied to other eco-systems. For example, they would be equally appropriate as an educational structure for presenting information to visitors to a grassland site.

## SURVEYING THE RAINFOREST SITES

At each of the six rainforest attractions, the interpretative material attached to the viewing constructions was surveyed. The following questions, based on the nine topics listed above, were asked:

- Were definitions of rainforest explained (ie what makes this forest a rainforest)?
- Were explanations of the different types of rainforest in Australia given?
- Was Aboriginal use of this rainforest explained?
- Was the impact of European farming and logging on this or surrounding rainforest considered?
- Was there information about current threats to nearby rainforests?
- Were different tree varieties labelled for identification?
- Were rainforest animals and insects covered?
- Were the growing conditions found in rainforests explained?
- Were the fragility and resilience of rainforests explained?

In addition, a tenth question was also asked - was there coverage of revegetation works or scientific research projects in the area?

Testing these questions was a subjective process. A simple scale of crosses was used. No crosses meant there was no material available or that it was inadequate. One cross was scored if the question was partially answered. Two crosses meant that there were good standard materials. The sites were surveyed as they were, no account was taken of future plans or that signs were temporarily absent.

A more complex scale, perhaps scoring the sites out of 5 or 10, was considered. However, these were not used, as I felt it important to use the test as a general indicator and that I believed complex numerical scores may have clouded the results.

The results are shown in table 1.

TABLE 1: Educational topics covered at selected rainforest attractions

	Curtain Fig	Malanda	Dorrigo	Minnamurra	Bulga	Maits Rest
	Queensland	Queensland	NSW	NSW	Victoria	Victoria
Visitor Centre			xx	X	xx	
Rainforest Definition					X	
Types of Rainforest			x		XX	X
Aboriginal Use		XX	XX	XX		
European Settlement			x	x	xx	
Current threats						
Labelling of Varieties	X	XX	X	XX	x	
Animals and insects	X		XX	XX	x	xx
Growing conditions	xx	XX	XX	XX	xx	xx
Fragility/ Resilience					xx	xx
Revegetation/ Research				X	X	

The matrix is best read horizontally (by topic) rather than vertically (by site). It is really not that important that Dorrigo scores eleven, whereas Malanda scores six. The real value is the combined score across six sites for each question. For example, growing conditions scores twelve, that is all six sites had good quality information on that. In contrast, current threats scored zero, that is none of the site provided information about this issue. This is particularly interesting in that the Australian National ecotourism strategy states that educational and interpretative material, 'could also address issues such as resource management' (Australia, Department of Tourism, 1994: 17).

Variations between sites and states are intriguing. Bulga has good information on European settlement, Maits Rest, run by the same public land manager - Parks Victoria - has none. The two Victorian sites have good information regarding the fragility and resilience, but the sites in other states do not.

Overall, the coverage of the interpretative material is disappointing. Perhaps there are two explanations for this. The first is that interpretative material at natural attractions is often deliberately kept at a low level. Language is often aimed at that of an 1! or 12 year old and text may be minimised in favour of visuals and experiential material (Hall & McArthur: 1996, 91-2). Signage may be thought of as conflicting with the natural surroundings, as unnecessary visual pollution. Second, it may be that public land managers who have built viewing constructions believe that they are sufficient for the visitor. In some ways it is easier to obtain public funding for building capital works than it is for on-going complimentary services such as tour guides (and no guides were available at the six sites) and maintenance of capital works.

#### THE VIEWING EXPERIENCE

Rainforest viewing constructions have been developed to allow visitors to gain a satisfying experience of viewing rainforests. Whether they provide the satisfying experience that the modern tourist requires is open to question. As noted above, in concentrating on building a physical structure (in some cases of imposing engineering standards), interpretation may be ignored. The visitor may view the rainforest, but gain little or no understanding.

A further problem is that the visitor may not even be obtaining the best view. The basis of all six sites covered is that elevating the visitor improves their view. However, there seems to be inadequate consideration of what the visitor is intended to view.

The general principle is that elevation allows the visitor to view the canopy of the rainforest. As such the basic premise is that the canopy is the most interesting feature of the rainforest. Or is it that the canopy can only be viewed if one is artificially taken into it? If the visitor has an equally good view at from numerous sites at ground level and may gain an equally good understanding, then why is an elevated construction needed? It may simply be that such constructions are touted as giving a better view in order to justify their existence. In short the medium of the construction (and its rarity) may have become more important than the message of experiencing a rainforest (and its relatively widespread availability).

If access to the canopy is desirable, do the existing constructions provide that access? The Curtain Fig and Malanda do not, being essentially at ground level. At Minnamurra the visitor is elevated, but does not penetrate the canopy. At Dorrigo, the Skywalk is above the canopy. At Maits Rest the visitor is below the canopy except for one small creek crossing. Only at Bulga is the visitor immersed in the canopy, but does not really come through it.

The problem with Dorrigo and Bulga, the two most elaborate of the constructions, is that they are straight lines coming off steep 45-degree hillsides. As the rainforest canopy follows the contours, the point of intersection between the horizontal construction and the 45 degree canopy is too sharp. At Dorrigo the visitor is almost immediately above the canopy and travel along the Skywalk takes them further above it, a fairly unsatisfying experience. At Bulga, the steepness of the angle also takes the visitor to the upper levels far too quickly.

Minnamurra provides the best model for canopy viewing, even though it is not penetrated. At Minnamurra the raised walkways follow the contours of a steep gully. Close at hand the view is of a light understory, but 10 to 20 metres away the visitor sees the bottom of the canopy of the rainforest in the gully. Significantly similar use of contoured walkways is used at the excellent (though artificial) rainforest sections of the Adelaide and Canberra Botanic Gardens.

Further development of grander and more expensive constructions may be unnecessary. Contoured walkways may give a much better view than straight line bridges and skywalks. Combined with appropriate interpretive materials they may also provide the visitor with greater understanding and greater satisfaction.

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