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AN EMPIRICAL STUDY OF INDUSTRIAL TOURISM ATTRACTIONS

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ABSTRACT

The paper examines tourism enterprises for which the core business is not tourism (that is, industrial tourism attractions) within the context of tourism attraction theory. The paper reports on an empirical study that examined the extent to which industrial tourism attractions are judged as a recognisable type of tourism attraction which can be isolated and identified. Using a cluster analysis focussed on tourist behaviour in relation to tourism attractions, distinct clusters of attractions were identified, indicating that consumers mentally group certain types of attractions, including industrial tourism attractions. The implications of the findings are discussed in relation to the marketing and other aspects of the management of tourism attractions and, in particular, industrial tourism attractions.

INTRODUCTION

Before discussing the concept of industrial tourism, it is necessary to provide an overview of the conceptualisation of tourism attractions and the typologies which exist. The paper then considers industrial tourism within the concept of tourism attraction theory and reports on an empirical study of visitor perceptions of industrial tourism attractions.

Pearce (1991, p. 46) provides an operational definition of a tourism attraction as being a “named site with a specific human or natural feature which is the focus of visitor and management attention”. With regard to the development of typologies of attractions, Lew (1987) describes how tourism attractions have been discussed and researched from three perspectives, i.e., the ideographic definition and description of attraction types, the organisation and development of attractions, and the cognitive perception and experience of tourism attractions by different groups. When Lew considered tourism attractions from an ideographic point of view (i.e., the “concrete uniqueness of a site” (p. 555)) he divided attractions into three main types - nature, nature-human interface, and human. He suggests that each of the three main types can be further divided into three subsets. The "nature" type can be divided into general environments, specific features, and inclusive environments. The "nature-human" interface set can be divided into observational, leisure nature, and participatory, and the third type, "human" can be divided into settlement infrastructure, tourist infrastructure, and leisure superstructure. Lew's typology appears to be a comprehensive typology as it incorporates all types of attractions - managed and unmanaged and natural and human.

Gunn's (1988) typology differs from Lew's overview in that when he divides tourism attractions into types he considers the nature of the trip being experienced by the tourist. He believes that all attractions can be grouped into two major categories: “those intended for touring-circuit use and those for longer-stay use” (p. 53). This has a number of obvious weaknesses, not least of which is that attractions can appear in both categories which blurs the distinction. In addition, the intention of visitors visiting regional areas can change during their visit as they can move from being touring visitors to spending longer at one destination.

Prentice (1993) created a typology of 23 categories of tourism attractions, but he considered attractions from a slightly different perspective by developing a typology that is based on the main subject presented at the attraction. He suggests that the advantage of this is that attractions with like contents are grouped together, and by carrying out consumer surveys of tourists to such attractions it would be possible to “relate reasons for visiting, the benefits gained and other consumer characteristics to particular types of attractions” (p. 37). In other words, it is possible to “relate demand characteristics to supply characteristics through relating the characteristics of visitor segments to the attractions with the main

subject type of the attractions” (p. 37). In developing the typology, Prentice uses the definition of attraction as “a site, theme or area which attracts visitors” (p. 39). However, this typology has weaknesses as many attractions have a range of subjects presented at the attraction so the typology may become blurred. Other weaknesses are that tourists may visit different types of attraction when their travel party changes, and the fact that people have a variety of needs to satisfy. Therefore, it would appear that, while a number of authors has written about the definition and typology of attractions, a gap remains in the literature in that few authors have tested empirically the typology of attractions. It is the aim of this paper to address these neglected areas, in a limited way in relation to a particular type of attraction.

INDUSTRIAL TOURISM

Any definition of a tourism attraction should be sufficiently comprehensive to incorporate tourism attractions that have tourism as their core activity and those that are managed primarily for the production of non-tourism goods and/or services (that is, industrial tourism attractions). A definition that would cover both these types of tourism attraction is: A site that is open to the public, and *one* of its purposes is to allow the public to enter. Its core business can be either the production of goods and/or services intended solely for its visitors, or the production of goods and/or services not intended solely for its visitors, but with facilities provided for tourist access.

A range of terms has been used to describe the concept of industrial tourism but the definition used in this paper is as follows: Industrial tourism involves visits by tourists to operational industrial sites where the core activity of the site is non-tourism oriented. When describing the concept of industrial tourism, the term “industrial” has been chosen as it signifies that work is being carried out on the site and something is being produced, that is, goods and/or services. The term is based on the Standard Industrial Classification of “industry”, as it demonstrates that industry does not only include the traditional manufacturing areas of mining and construction; agriculture, forestry and fishing; and transportation, communications, electric, gas and sanitary services; but, that it also includes services: retail trade; wholesale trade; and, finance, insurance and real estate, and government services. It is this meaning of industry that is used in the term “industrial tourism”. Thus, the industries involved in industrial tourism can produce goods and/or services, they can be involved in the processing of raw materials or semi-processed inputs, they can have a large or small number of employees, and the processes can be automated and/or they can be labor intensive. The organisation can have public or private sector ownership and it can be profit or non-profit oriented. This emphasises the potential size of the industrial tourism sector and, as MacCannell (1976, p. 54) states, “potentially, the entire division of labor in society can be transformed into a tourism attraction”. However, while all producers *could* engage in industrial tourism, not all necessarily should. For

example, if viewing the production process is likely to alienate customers (such as has been suspected for some pet food manufacturing plants, and perhaps even for some legislatures), some organisations may be well-advised to forego inviting visitors. Research is needed to support such decision making.

Inskeep (1991), Prentice (1993) and Swarbrooke (1995) have incorporated industrial tourism into their typologies of tourism attractions. One of Inskeep's (1991) three categories of attractions is cultural attractions that are based on man's (or humankind's) activities. Inskeep then divides cultural attractions into archaeological, historical, and cultural sites; distinctive cultural patterns; arts and handicrafts; interesting economic activities; interesting urban areas; museums and other cultural facilities; and cultural festivals and the friendliness of residents. It is the "interesting economic activities" that are relevant to this discussion. Inskeep's description of interesting economic activities being "observed, described and sometimes demonstrated" (1991, p. 83), has some similarities to industrial tourism. He provides examples of such activities as the operation of tea and rubber plantations and processing plants, the use of working elephants in a tropical forest, traditional fishing and agricultural techniques in many areas, and the operations of modern manufacturing plants. However, the definition provided in this paper is different from Inskeep's for two main reasons. Firstly, the present definition also includes the production of services, some of which exist for less-obvious economic reasons, such as touring a public hospital, and secondly, under this definition industrial tourism never includes only a demonstration - it always involves the real or genuine production of goods and/or services, even though demonstrations may be provided also.

Prentice's (1993) typology of 23 categories of tourism attractions includes five types of attractions which incorporate elements of industrial tourism. They are: attractions concerned with primary production, for example, farms, dairies, vineyards, and mining; craft centres and craft workshops, for example, potters, woodcarvers, and lace making; attractions concerned with manufacturing industry, for example, factories, breweries, and distilleries; transport attractions, for example, canals, civil shipping, and civil aviation; and religious attractions, for example, cathedrals and churches. As each of these types of attractions incorporates elements of industrial tourism, this helps to illustrate the range of industrial tourism attractions that exist. A weakness of Prentice's typology is that the global aspect of industrial tourism is not highlighted in these examples. That is, by specifying some categories, the impression is created that these categories comprise a complete inventory with distinctive characteristics, whereas this paper argues for a broader perspective encompassing all goods and/or services, with the bases for subdivisions yet to be determined.

One of Swarbrooke's four categories of attractions describes sites that have been "designed for a purpose other than attracting visitors" (1995, p. 4). This category incorporates industrial tourism, as the site may have been designed principally for the purpose of producing non-tourism goods and/or services, rather than being

primarily a consumer tourism attraction. This category is closest to the present definition as it suggests that the purpose of the site being in existence is a crucial element in differentiating it from other types of attractions, but the recognition that a duality of purpose may be present - not just a sole purpose - is not accentuated.

Yale (1991) and Dodd and Bigotte (1997) have used the term industrial tourism in a way similar to the present definition. Yale describes industrial tourism as the presentation of “contemporary manufacturing processes” (1991, p. 142), while Dodd and Bigotte describe industrial tourism as “visits by consumers to the site of a production facility and can include educational tours of the facility and tasting of the product that is produced” (1997, p. 47). However, both of these descriptions are not as extensive as the present definition, as Yale limits industrial tourism to visits to manufacturing enterprises, and Dodd and Bigotte suggest that the visitors can “taste the product” which, again, has limitations. Other authors have used a variety of terms to describe aspects of industrial tourism: “agricultural tourism” “...an enterprise that produces and/or processes plants or animals and which also strives to attract visitors to enjoy the agricultural attributes of the operation and its site, and/or to purchase agricultural products produced or obtained by the enterprise” (Cox and Fox 1991, p. 18); “farm stays” “...guests can observe and occasionally participate in farm activities” (Pearce 1990, p. 338); “wine tourism” “...visitation to vineyards, wineries, wine festivals and wine shows for grape wine tasting and/or experiencing the attributes of a grape wine region” (Macionis 1996, p. 269); “work displays” “...examples of work displays include guided tours of banks, the telephone company, industrial plants” (MacCannell 1976, p. 36); “workplaces” “...to observe and understand the operations of other people’s workplaces, and to shop for the products or mementos of the company” (McBoyle 1994, p. 517); “factory tourism” “...visits to working factories to see industry in action, mainly manufacturing industry” (Swarbrooke 1995, p. 51); “sideline tourism” “...organised activities mounted to appeal to tourists, but as sidelines, peripheral to the primary functions of non-tourism-oriented activities” (Kelly and Dixon 1991, p. 21).

Each of these terms has limitations in that it does not embrace the full range of possible sites. For example, the terms agricultural, farm, and wine tourism are limiting in that they focus only on agriculturally-based industries, while factory tourism is limited in that it focuses mainly on manufacturing industry. It would appear that Kelly and Dixon’s (1991) description of “sideline tourism” is the closest any authors have come to the present definition of industrial tourism. However, the present authors believe that the expression “sideline tourism” is not adequate to describe industrial tourism because of the connotations of the term “sideline”. The term “sideline” is misleading as it suggests that the development of tourism at the site was an afterthought by management and can therefore be dismissed as not being worthy of attention. In contrast, the present authors believe that, in the case of an industrial tourism attraction, although tourism is not the core activity of the organisation, it may still be very important from a management

perspective and, as such, is worthy of attention and so should not be dismissed capriciously. The present authors believe that the term “industrial tourism” is more appropriate as it not only denotes that something industrious is occurring, with goods and/or services actually being produced on the site, which is accessible to tourists, but it also has more appropriate connotations of power, activity, and merit.

Although the various authors described above include examples of industrial tourism in their discussion of typologies of attractions there appears to be a lack of attention to industrial tourism from a conceptual standpoint. It is, therefore, suggested that most authors in the area of attraction research are fully aware that tourists visit operational industrial sites, that is, places where non-tourism goods and/or services are produced, but they have not developed the specific concept to a substantial extent or empirically tested the extent to which industrial tourism attractions are perceived to be different from other types of attractions. This empirical aspect is addressed in the study which is reported, as follows.

METHOD

The subjects were 500 adult residents of Melbourne. Domestic residences were selected randomly from the entire metropolitan area, according to a cluster sampling design. A team of professional interviewers conducted the personal interviews. To determine their preferred tourism attractions, respondents reported their actual visitation of 31 named attractions on a dichotomous scale, and their degree of interest in visiting, and intention to visit those 31 attractions in the next 12 months (or when they were available next), on separate series of 1-7 scales (high scores indicated greater interest or intention). The three measures of tourism behaviour captured overt and covert behaviour, past and future behaviour, and the relationship between stages in the consumer decision making process.

In general, the attractions chosen were ones that appeared in a list of the leading State tourism attractions, and included events (Tourism Victoria, 1995), and 12 industrial tourism attractions. Virtually all of the attractions and events were in Victoria with the majority being Melbourne-based, as it was important that the respondents were able to relate to the items on the list. For example, the attractions listed included the National Gallery of Victoria, the Australian Football League (AFL) Grand Final, the Melbourne International Comedy Festival, Sovereign Hill (Ballarat), the Moomba Festival, and industrial tourism attractions such as Bendigo Pottery (Bendigo). After the data were cleaned there were 464 useable responses. Cluster analysis was performed on the interest and intention data for the attractions, i.e., on the 31 attraction variables, using the 464 respondent cases, using SPSS.

RESULTS AND DISCUSSION

The goal of cluster analysis is to identify homogeneous groups that have a likeness within groups but a difference among groups. The two dendrograms (Figures 1 and 2) illustrate the results of the hierarchical cluster analysis carried out on the measures “interest in visiting” and “intention to visit”.

Figure 1: Interest in Visiting

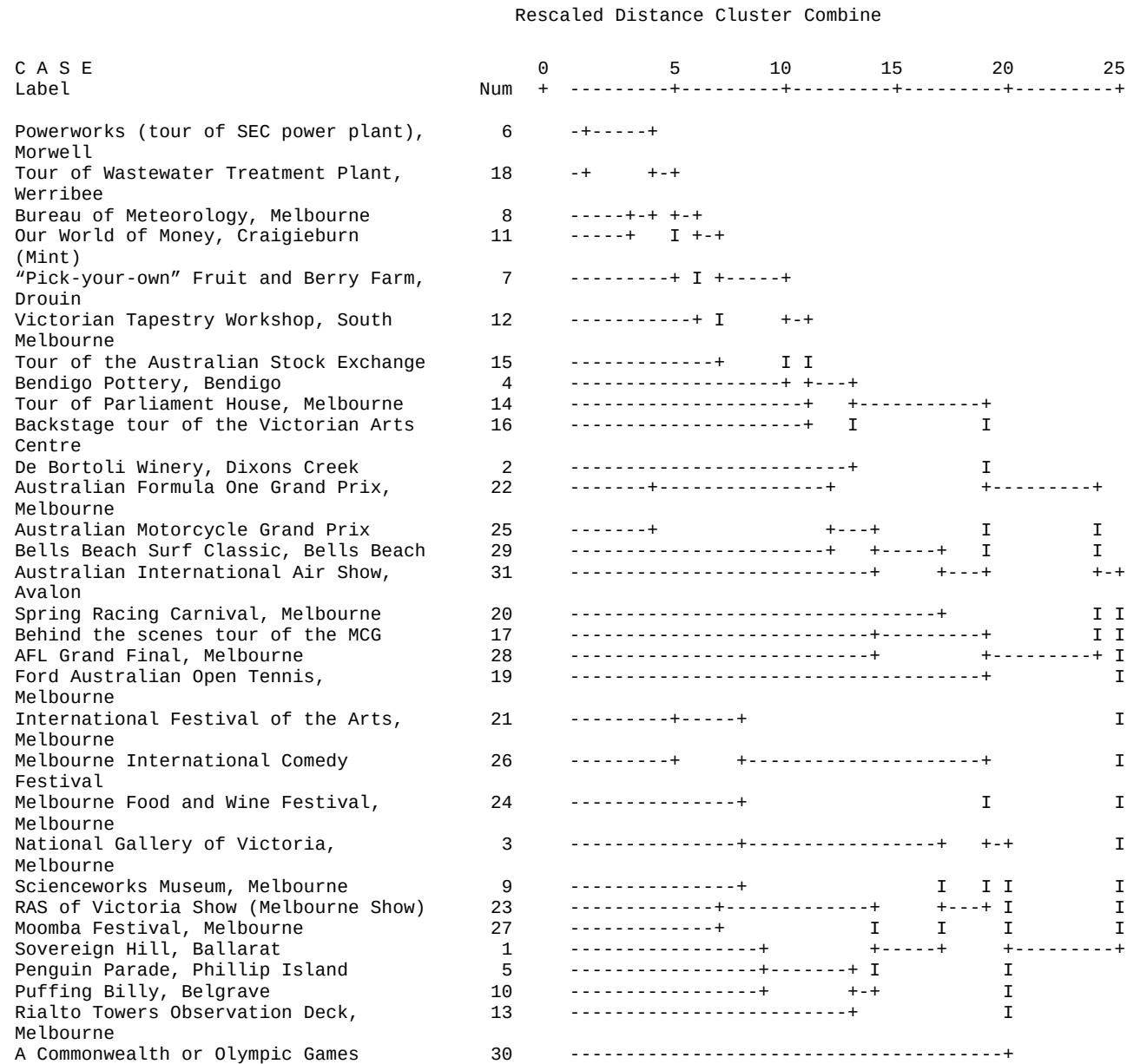


Figure 2: Intention To Visit

Rescaled Distance Cluster Combine

C A S E		0	5	10	15	20	25
Label	Num	+	-----+	-----+	-----+	-----+	-----+
Powerworks (tour of SEC power plant), Morwell	6	-+-+					
Tour of Wastewater Treatment Plant, Werribee	18	-+ I					
"Pick-your-own" Fruit and Berry Farm, Drouin	7	---+-+					
Bureau of Meteorology, Melbourne	8	---+ +-+					
Victorian Tapestry Workshop, South Melbourne	12	---+ I +-----+					
Our World of Money, Craigieburn (Mint)	11	-----+ I +-+					
Tour of the Australian Stock Exchange	15	-----+ I +-+					
Bendigo Pottery, Bendigo	4	-----+ I +-+					
Tour of Parliament House, Melbourne	14	-----+ I +---+					
Backstage tour of the Victorian Arts Centre	16	-----+ I I					
De Bortoli Winery, Dixons Creek	2	-----+ I					
Behind the scenes tour of the MCG	17	-----+-----+					
Australian Motorcycle Grand Prix	25	-----+-----+ I					
Bells Beach Surf Classic, Bells Beach	29	-----+ +---+				+-----+	
Australian International Air Show, Avalon	31	-----+ I I					
Australian Formula One Grand Prix, Melbourne	22	-----+-----+ I I					
AFL Grand Final, Melbourne	28	-----+ +---+ I					
Ford Australian Open Tennis, Melbourne	19	-----+---+ I					
Spring Racing Carnival, Melbourne	20	-----+ I					
RAS of Victoria Show (Melbourne Show)	23	-----+-----+ I					
Moomba Festival, Melbourne	27	-----+ +---+ I					
A Commonwealth or Olympic Games	30	-----+ I I					
Sovereign Hill, Ballarat	1	-----+---+ I I					
Penguin Parade, Phillip Island	5	-----+ +-----+ +-+					
Puffing Billy, Belgrave	10	-----+ I I					
International Festival of the Arts, Melbourne	21	-----+-----+ +---+ I					
Melbourne International Comedy Festival	26	-----+ +-----+ I I I					
Melbourne Food and Wine Festival, Melbourne	24	-----+ +---+ +-+					
National Gallery of Victoria, Melbourne	3	-----+-----+ I					
Scienceworks Museum, Melbourne	9	-----+ I					
Rialto Towers Observation Deck, Melbourne	13	-----+					

An examination of the dendrogram for interest in visiting revealed approximately five clusters overall, and a single outlier (the Commonwealth or Olympic Games, which is obviously a very special event). The first cluster contains 11 of the 12 examples of industrial tourism attractions, and is not contaminated with any other attraction. The second cluster contains five examples of sporting events. The next cluster contains three examples of other sporting related attractions, including the remaining industrial attraction, the tour of the MCG, as well as the event of a game of football being played at the MCG. The next cluster contains three examples of festivals. The final cluster contains eight “family” type, mass or general attractions or events.

The dendrogram for intention to visit also revealed approximately five clusters overall. The first cluster contains all 12 examples of the industrial tourism attractions. The next cluster contains three examples of sporting events outside central Melbourne, while the third cluster contains four examples of sporting events in Melbourne. The next cluster contains three examples of general events, and the final cluster contains family-oriented attractions and festivals. Recognising that the focus of this paper is industrial tourism, the clustering of the other attractions will not be explored here.

From the dendrograms it is apparent that there is a striking degree of coherence in the sample’s grouping of the industrial tourism attractions. Although the respondents were not prompted in any way to view the industrial tourism attractions as being primarily industrial tourism attractions, it may be inferred that the fundamental basis for segregating industrial tourism attractions from the other attractions in a broad set of diverse attractions is their industrial character. The set of industrial tourism attractions is internally heterogeneous on many obvious characteristics, such as focussing on goods or services, primary or secondary or tertiary industry sector, public or private sector ownership, location in Melbourne or regional Victoria, and being of specialist or generalist interest, just as the attractions are in the other clusters. Hence, it may be argued that these attributes are not determinant in the perceptual classification schema operating here.

The omission of just one industrial tourism attraction from the primary cluster on the interest variable (but none on the intention variable) may be understood in the context of another MCG-related attraction being presented to respondents for assessment, with a strong link being formed between the two items (the AFL Grand Final and the tour of the MCG) on the notion of “MCG-ness”. Of greater impact is probably the extreme homogeneity of the industrial tourism attraction clusters, which exclude all other attractions.

CONCLUSION

This paper has established that people, in general, perceive industrial tourism attractions as different to other attractions. This finding has not been reported previously, based on a broad empirical study.

An important next step is to investigate the extent to which industrial tourists may be distinguished from other tourists. This is, of course, the essence of market segmentation, and fundamental to determining whether a collection of consumers in a market amount to a feasible market segment, or simply a hypothetical market segment (Leiper 1995). The marketing literature suggests that four conditions should be satisfied to warrant serious attention: that this subset of consumers be sufficiently valuable, easily identified, possess distinctive needs, and be economically accessible (Kotler 1994). Conceptually, what are the bases for characterising industrial tourism attractions and industrial tourists, and to what extent are latent and manifest aspects involved? For example, are industrial factory tourists mainly engineers who take “busman’s holidays”, or clerical workers who are frustrated engineers? Are the similarities between visitors to wineries, farms, television studios, and steel mills greater than the similarities between visitors to wineries and visitors to Disneyland or tropical resorts?

To advance the understanding of tourism attraction visitation it would appear necessary to carry out further empirical research on potential visitor attributes, such as demographics and psychographics, including personality types and occupations, to determine the type of attractions they are interested in visiting and in particular, to determine the personality type of people who are interested in visiting industrial tourism attractions. Some initial results have been reported by Frew and Shaw (1997), including industrial tourism but without accentuating the industrial tourism component. From a marketing perspective, if the personality types and occupations of prospective visitors are known, then the industrial tourism attraction can use the most appropriate professional publications and special interest magazines, for example, to reach the target market.

Industrial tourism is under-researched. Systematic research is required to identify the principal components and distinguishing features of industrial tourism operations, to document and enumerate their presence, and to locate industrial tourism more explicitly in the general tourism marketing system.

REFERENCES

- Cox, Linda J. and Morton Fox (1991), "Agriculturally Based Leisure Attractions," *Journal of Tourism Studies*, 2 (2), 18-27.
- Dodd, Tim and Véronique Bigotte (1997), "Perceptual Differences Among Visitor Groups to Wineries," *Journal of Travel Research*, 35 (3), 46-51.
- Frew, Elspeth A. and Robin N. Shaw (1997), "Personality and Tourism Behavior: A Test of Holland's Theory," in *Proceedings of the Research and Academic Papers of the Annual Conference of the International Society of Travel and Tourism Educators*, Cathy H. C. Hsu, ed., pp. 32-45. Harper Woods, MI: International Society of Travel and Tourism Educators.
- Gunn, Clare A. (1988), *Vacationscape: Designing Tourist Regions*. New York: Van Nostrand Reinhold Company.
- Inskip, Edward (1991), *Tourism Planning: An Integrated and Sustainable Development Process*. New York: Van Nostrand Reinhold.
- Kelly, Ian and Walter Dixon (1991), "Sideline Tourism," *Journal of Tourism Studies*, 2 (1), 21-28.
- Kotler, Philip (1994), *Marketing Management: Analysis, Planning, Implementation, and Control*. (8th ed.). Englewood Cliffs, New Jersey: Prentice Hall.
- Leiper, Neil (1990), "Tourist Attraction Systems," *Annals of Tourism Research*, 17, 367-384.
- (1995), *Tourism Management*. Collingwood, Victoria: TAFE Publications.
- Lew, Alan A. (1987), "A Framework of Tourist Attraction Research," *Annals of Tourism Research*, 14, 553-575.
- McBoyle, Geoff (1994), "Industry's Contribution to Scottish Tourism: the Example of Malt Whisky Distilleries," in *Tourism: State of the Art*, Anthony V. Seaton, ed., pp. 517-528. West Sussex, England: John Wiley and Sons Ltd.
- MacCannell, Dean (1976), *The Tourist: A New Theory of the Leisure Class*. New York: Schocken Books.
- Macionis, Niki (1996), "Wine Tourism in Australia", in *Tourism Down Under II: Towards a More Sustainable Tourism*, Conference Proceedings, Geoff Kearsley, ed., pp. 264-286, Dunedin, New Zealand: Centre for Tourism, University of Otago.

- Middleton, Victor T. C. (1994), *Marketing in Travel and Tourism*. Oxford: Butterworth-Heinemann.
- Pearce, Philip L. (1990), "Farm Tourism in New Zealand: A Social Situation Analysis," *Annals of Tourism Research*, 17, 337-352.
- (1991), "Analysing Tourist Attractions," *Journal of Tourism Studies*, 2 (1), 46-55.
- Prentice, Richard (1993), *Tourism and Heritage Attractions*. London: Routledge.
- Swarbrooke, John (1995), *The Development and Management of Visitor Attractions*. Oxford: Butterworth Heinemann.
- Tourism Victoria (1995), *Visitors to Victoria's Attractions*. Melbourne: Tourism Victoria.
- Walsh-Heron, John and Terry Stevens (1990), *The Management of Visitor Attractions and Events*. Englewood Cliffs, New Jersey: Prentice Hall.
- Yale, Pat (1991), *From Tourist Attractions to Heritage Tourism*. Huntingdon: Elm Publications.