



**THE USE OF VISITOR MANAGEMENT TECHNIQUES TO
PROTECT A FRAGILE ENVIRONMENT: A CASE STUDY OF
PRACTICES IN THE NEW FOREST**

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ABSTRACT

Tourism, as a human activity, is not likely to be managed effectively if there was a lack of management focus on the visitors. Visitor management plays a vital role in a tourism destination in terms of increasing visitors' experience and level of enjoyment, as well as modifying their on-site behaviour to be more appropriate. Through a combination of various techniques, visitors are provided with controlled access to experience the tourism resources. In so doing, visitors' understanding and appreciation of the features at a site may be increased through the use of interpretation, while restrictions, regulations and resource alteration methods are used to protect the resources from inappropriate visitor activity.

Interpretation, restrictions, regulations and other management-related/administrative information need to be delivered to visitors. Furthermore, persuasive communication is effective to modify visitors' on-site behaviour. Regulations and restrictions are usually law-enforced. Because their persuasive function is of coercive type (the managing agencies have the ability to administer punishment if visitors fail to comply with the regulations), visitors' level of enjoyment and understanding of the features at a site is less likely to be increased. A softer style of persuasive communication with visitors (interpretation, marketing and visitor codes) is therefore necessary in order to advise visitors about the sensitivity of the resources and the appropriate behaviour to conduct during their visit. In other words, the hard and soft approaches of visitor management should be used interdependently. Hence, the understanding of (1) how people's intention to behave in a particular manner is formed, and (2) how to maximise the effectiveness of communication, is necessary in order to plan and implement successful visitor management.

The visitor survey was carried out in the calendar year of 1999, and 1,053 visitors participated in the research. The questionnaire-based survey of visitors was conducted

at several locations in the New Forest, and the number of surveys to be carried out was distributed throughout the year of 1999 based on the tourism seasonality of the New Forest.

The research findings point out that imposing more regulations is not perceived necessary in the current visitor management in the New Forest. Instead, the sampled visitors would like to know more about the environmental aspects about the site, and the appropriate activities to participate in. Moreover, information provided through interpretive panels and bulletin boards is thought to be less than adequate by the visitors, and they think the signage in the site is not maintained to a high standard. Give the fact that signage is one of the favoured media, the quality and information contents of signage in the New Forest need to be improved.

Moreover, with respect to the interpretation of the New Forest, visitors thought the information relating to the environmental aspects of the site and the appropriate visitor activities to be carried out should be improved in terms of the quantity. The analysis shows that in general, visitors would be willing to alter their behaviour to be more appropriate if they were made aware of such interpretive information. In addition, the majority of the visitors, except for the New Forest District local residents, do not object to be charged for the use of tourism facilities such as car parks, providing the revenue is used for resource protection purpose. In other words, visitors value the significance of the New Forest in terms of being resource rich and being an important site that offers recreational opportunities to them. Thus, they expressed their willingness to contribute financially to help the management and protection of the site.

The research findings are expected to provide organisations that are responsible for the management of tourism destinations with information relating to the planning and implementation of effective visitor management approaches, because successful visitor management is a step forward towards the long-term sustainable tourism development.

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ABBREVIATION

FC	Forestry Commission
NFD	New Forest District
NFDC	New Forest District Council
TIC	Tourist Information Centre
UNEP	United Nations Environment Programme
VFR	Visiting family and friends
WTO	World Tourism Organisation
WTTC	World Travel and Tourism Council

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CHAPTER ONE

INTRODUCTION TO THE RESEARCH OF VISITOR MANAGEMENT PRACTICE AT TOURISM DESTINATIONS

INTRODUCTION

This chapter sets out the background of the study of visitor management practice in the New Forest, including the motives, objectives and hypotheses that underpin the research. It also provides an outline of the role of each chapter in the thesis.

1.1 BACKGROUND OF THE STUDY

Sustainable tourism, tourism planning and the impacts of tourism have been the focus of much research during the past couple of decades, and so have alternative forms of tourism activities such as ecotourism, agri-tourism, farm-tourism and special interest tourism been suggested. In spite of the good intentions of these alternative forms of tourism and tourists, it is unlikely that one would conclude that they cause less or no impacts to the host communities or environment. Outdoor tourism activities usually take place in sites where they are attractive to people, and the factors that draw visitors to a site include natural scenery, wildlife, historical monuments, accessibility, and suitability of providing activities such as walking, cycling, horse riding, fishing, camping, climbing and water sports. These factors are the resources that a site might possess, and they require careful planning and management in order to maintain their quality into the future. Moreover, many of the resources are irreplaceable, difficult to restore and highly sensitive. For example, the Great Wall in China, the Pyramids in Egypt, Stonehenge in England, coral reefs, forests, flora and fauna cannot be replaced and may be extremely difficult to restore if they are subject to inappropriate use.

Many natural and historical resources are under the protection of international organisations, national or local governments and private agencies. Nonetheless, setting out principles on protecting the resources is insufficient if the users and uses of such resources are not managed. These principles may include total or partial restrictions on construction in or around the area, consumption of and access to the resources. However, applying restriction on access to such resources does not help people understand and appreciate our heritage. Instead, the lack of understanding, appreciation and interest is likely to lead to deliberate and/or unintentional damage, even destruction, of the resources. Through the development of tourism, visitors are provided with access to experience these resources, but their use of the resources should be managed and controlled.

Because access to and interaction with the resources needs to be managed, visitors need to be made aware of what activities to carry out, where to go, and why their activities need to be controlled. Visitor management consists of a combination of strategies to provide information to visitors and to induce them to exhibit acceptable behaviour and to pursue desirable activities in tourism destinations. Moreover, one of the strategies of visitor management has the function of education. That is, educating visitors about the value of the resources and increasing their knowledge relating to the features of the site and to foster their willingness to contribute to the protection of the resources in a more active manner. In other words, visitor management plays a core role in the successful management of a tourism destination.

Moreover, visitor management can help to enhance visitor experience at the destination through the provision of information. Experience is the core of tourism activity. A common explanation of people's travel motivation is the individual's desire for novelty, arousal, or stimulation. People want to travel because they want to know something new, experience something different from their home environment. Research findings consistently show the key motivation to undertake tourism activity is seeking for novelty (Crompton 1979; Dann, 1977, 1981; Lee and Crompton, 1992). Mayo and Jarvis (1981) also point out that an individual's psychological needs consist

of a basic desire to know, to be aware of reality, to get the facts, and to satisfy their curiosity. The experiences from visiting a place fulfil an individual's needs to explore, to know something new and something different to their daily routines. Hence, providing information to visitors not only enhances visitors' safety during their stay at a site, educational information also offers visitors the opportunity to learn more about the destination, which can positively and effectively enhance visitors' experiences.

Recently there was a posting on TRINET from Bauer (21 October 2002) about his participation in a Geological Society of Hong Kong field trip to a remote part of China and Tibet. They were geologists and geology enthusiasts, accompanied by Tibetan geological experts, and were under the guidance of a geological professor. They stopped regularly to look at geological features, contributing to the local economy by eating in local restaurants and sleeping in converted Chinese Army barracks, and hiring a local driver. In Bauer's own words, they were doing all the things an ecotourist is supposed to do. His experience of this trip led to his thoughts of "... all I could see was a group of people away from home voluntarily enduring the consequences of altitude sickness, out there to have an experience - in other words tourists". This comment sums up the fundamental nature of tourism, irrespective whether it is eco or not, that experience a site offers is the pulling factor that attract visitors.

The experience-seeking nature of tourism makes it difficult for the agencies that manage tourism destinations to replace the real, first-hand experience and discourage visitors to come to the site by substituting the visit experience with audio-visual programmes, printed materials or on-line information. For instance, the wildlife in Africa is a major attraction that many visitors go there to see the wildlife roaming freely in the plain. Viewing the same animal, for instance, a leopard, in a zoo setting is very different to seeing it in its native environment. Television documentaries of African wildlife although providing a large number of viewers with the chance to see the leopard roaming freely in its natural setting with minimised disturbance on the animal, but the experience of watching the television programme cannot replace the

thrill of seeing it in its real setting. Therefore, people participate in safari tours to seek the real experience. However, the sensitivity of the resources means that such destinations are likely to suffer from the visitors' inappropriate or over use of resources. Visitor management has the function of informing visitors about the desired activities to be carried out at the site, inducing encouraging them to undertake appropriate activities and behaviour and providing them with educational and entertaining programmes about the features of the destination to heighten their experiences.

The researcher also found the study of visitor management strategies appealing because of her work experiences prior to the commencement of her PhD research. As a tour manager, the job responsibility includes most of the dealings and arrangements for ground transport, accommodation and activities, as well as guiding and providing interpretation at attractions, such as national parks and historical monuments. It was during the guiding experiences that the researcher learned the importance of visitor management in tourism destinations. The researcher had seen negative incidents in historical sites, for instance, the Pyramids, the Luxor Temple and the Valley of the Kings in Egypt, where visitors were collecting antiquity objects from the ground, taking photos with flash when there were signs advising visitors not to take photos with flash, and touching objects or wall paintings. On another occasion in the Grand Canyon National Park, the researcher witnessed a film about the formation of the Canyon in the I-Max cinema and felt that such a film was an effective way of providing interpretation to the Park visitors. It was then the researcher questioned how visitors' activities can be managed more efficiently: is the application of regulations an effective way to manage visitors? are there other management strategies that can be used to achieve the objectives of tourism management? and whether one form of interpretation delivery is more effective than other forms in influencing visitors' behaviour?

Since visitor flows to tourism destinations are unlikely to become less of a problem, managing visitors' activities to be more appropriate is a proactive way of ensuring that

both the host and the visitors benefit from the development of tourism in the long term. Therefore, the researcher decided to undertake research into visitor management techniques intended to managing tourism development in sensitive areas.

1.2 THE IMPORTANCE OF THE INTEGRATION OF THEORIES OF BEHAVIOURAL MODIFICATION AND THEORIES OF COMMUNICATION INTO SUCCESSFUL VISITOR MANAGEMENT STRATEGIES

There is a significant amount of research devoted to the theories of learning and behavioural modification and theory of communication. This is because that the main purpose of managing visitors is to control their activities so that they can have an enjoyable, safe and satisfying experience in the destination whilst not damaging the resources. In other words, the use of visitor management strategies aims to modify visitors' behaviour via the application of various means, including education and enforcement. Hence, it is necessary to understand how people learn and what factors have influences on the formation of behaviour. Although such learning and behavioural formation process at tourism destinations differs to the formal education that takes place in classrooms, the traditional theories of learning provide the platform to an understanding of human learning.

The strategies of visitor management are more concerned with the appropriate manipulation of visitors' feelings of likes/dislikes, fear/discomfort, satisfying /reluctant. That is, visitor management relies on the understanding and wise stimulation of visitors' feelings, such as their need to have enjoyable experiences, worries or fears about being punished (for instance, fines and bans imposed on them), feeling uncomfortable or guilty for being an "environment killer", and feeling satisfied when they know they undertake appropriate activities or donate £10.00 to protect the tourism resources. Wanting to arouse such feelings, theories such as operant conditioning, observational learning and cognitive learning need to be understood as they provide an explanation to the operation of various techniques of visitor management.

The managers or planners who set out the strategies of visitor management for a tourism destination may have little knowledge of such theories of learning and behavioural modification, but often they know that the application of regulations can achieve the goal of controlling visitor flows and preventing unwanted visitor behaviour from happening. They also know that in general, visitors are willing/eager to know more about the site, and they are likely to be frustrated by the lack of information prior to and during their visits to the destination. Thus, one can see the large amount of printed material related to tourism and travel in a book shop, and the signs with directorial, administrative and interpretation information when near a tourism destination. In other words, tourism destination planners and managers practise and rely on visitor management strategies to help manage and protect the destination to a great extent. However, their lack of understanding of the theories of behavioural modification is likely to result in a less than optimal use of visitor management techniques and in turn, visitors' experience and the protection of tourism resources may be compromised.

The core to successful visitor management is communication with visitors. By providing a wide range of information to visitors, including directorial, administrative and management related, and educational/interpretive information, visitors are welcomed to experience the features and activities available in the site whilst observing the applied restrictions on visitor activities. Communication with visitors is intended to deliver the information about the site to enhance their visit experience and enjoyment. Communication also deliver information of hard visitor management techniques to visitors, that is, to make them aware of the penalty should they carry out inappropriate behaviour.

In other words, understanding how people learn and modify their behaviour is necessary, as such knowledge is crucial to identifying the factors that affect an individual's behaviour formation. Knowing these factors helps tourism destination managers effectively combine and apply various visitor management methods to control visitors' inappropriate behaviour and increase their understanding of the site as

well as their enjoyment. Furthermore, communication is the means that enables visitors to become aware of the information - where to go, what to do, what to see, the opening hours, the values of the features, and more importantly, what restrictions are applied and therefore, what not to do.

The desired outcome of visitor management is that visitors will modify their behaviour to be more appropriate. Visitors' appropriate behaviour in the destination means the possibility of causing damages to the resources is limited. Therefore, providing information that is able to stimulate visitors' willingness to engage in desirable behaviour/activities is a proactive way of managing visitors in tourism destinations. Interpretive and educational information is believed to have the function of increasing visitors' knowledge of the site and the skills to undertake actions that can benefit the protection of the resources. Thus, successful visitor management should be a combination of various techniques that can control visitors' behaviour and activities to achieve the immediate outcome of protecting the resources for long-term tourism development while encourage them to adapt more desirable behaviour willingly via the provision of well-designed interpretive information.

1.3 OBJECTIVES AND HYPOTHESIS OF THE RESEARCH

1.3.1 Research Aims

This study is concerned with the practice of using visitor management strategies in tourism destinations. It is particularly concerned with identifying the appropriate use of visitor management techniques that can help protect and manage the resources of a site while providing visitors with enjoyable experiences. The New Forest is chosen as a case study area. According to the literature with respect to the various strategies of visitor management, researchers suggest that they can help to enhance visitors' experiences, understanding, and appreciation of the values of the resources. Furthermore, the use of regulations, charges for car parks and other facilities, and physical alteration and resource hardening have direct effects on the management of

visitor flows and behaviour. Hence, the research aims to demonstrate that a combination of various visitor management strategies is crucial in maintaining long-term tourism development in a tourism site.

Of particular interest to this research are the formation of visitors' intentions to engage in desirable behaviour that is induced by effective and persuasive communication with them, visitors' perception of the practised visitors management strategies, and their preference of media.

Firstly, the research attempts to demonstrate that effective communication with visitors is critical in successful visitor management, because visitors need to be made aware of the information that is intended to assist visitors during their visit to the site. Furthermore, the information provided to visitors should be wide ranging and comprehensive, including directorial, administrative/management related, and interpretive/educational information.

Also, the strengths and weakness of visitor management strategies and media used in the research site are explored. In this research, visitors' awareness of the applied visitor codes, their purposes of going to the Tourist Information Centres, perceptions and preferences of media, site managing authorities' techniques in controlling visitor flow, and visitors' perceptions of the practice of the visitor management techniques are examined. The research findings indicate which visitor management strategies need improvement in the research site.

Additionally, according to the literature review, the factors that have influences on visitors' formation of intention to behave in a particular manner include an individual's knowledge, skills to act, perceived subjective norms, the availability of other alternatives, personal factors and their acceptance of the "users pay" principle. The research attempts to determine what factors affect the sampled visitors' willingness to pay for car parking and what they perceive to be acceptable charges for parking within the research site. During the survey period, car parking was free of

charge in the Crown Lands of the New Forest. Hence, in order to achieve this research objective, hypothetical questions concerning whether visitors are willing to pay for car parking and how much they are prepared to pay were used to research visitors.

One point of some concern to the researcher is the volume of visitors to the New Forest. The available secondary data do not provide credible figures with respect to the annual visitor numbers to the New Forest and their usage of the site. Therefore, based on the collected data from the survey, firstly, the visitor numbers and usage of the New Forest per annum is explored. Furthermore, the sampled visitors' profile is established, including their demographic background, purposes of visits, types of accommodation for overnight stay visitors, geographical origins of their residences, transportation mode to come to the site and the outdoor activities they carried out. The profile of visitors is used to test some of the research questions that are listed below.

1.3.2 Research Hypotheses

The research hypotheses include:

- The easy accessibility to the New Forest contributes to the large volume of visitors from the nearby regions/counties;
- Because of the easy accessibility to the New Forest, visitors are likely to make spontaneous decisions to visit the site. Therefore, the time lapse between decision making and their visits to the Forest tends to be short;
- Factors that affect the time lapse between decision making and visits to the site include the visitors' geographical origins of their residences, whether they stay overnight in the site and their purposes of visit;
- The predominant market of the New Forest is the family sector - as per most of the marketing material suggests/shows, family members strolling on the grass land of the New Forest and carrying out activities such as having a picnic, cycling, walking pet dog and camping;

- Visitors' overall satisfaction is affected by factors including their level of enjoyment from their participation in outdoor activities, and their perceptions of the quality of the tourism facilities and the scenery - this relationship should be positively correlated;
- Visitors lack knowledge about the existence of the applied visitor codes in the New Forest, except for the two most seen codes - 40 mph speed limits and animal feeding is prohibited;
- Visitors' familiarity with the New Forest has a direct and positive link to their knowledge of the existence of the applied visitor codes;
- Visitor' familiarity with the New Forest also affect their purposes of going to the Tourist Information Centres;
- Visitors familiarity with the New Forest will have an influence on their perceptions of the effectiveness of the media in delivering information - that first-time visitors are likely to have lower grade of perceptions of the effectiveness of media than repeat visitors;
- Printed material such as guidebooks, site maps and leaflets are the most favoured medium by visitors, irrespective of the destinations they go to visit;
- Visitors would not object to the idea of paying for car parking in the Crown Lands of the New Forest, subject to the assumptions that firstly, the car park ticket is transferable within the car parks in the Crown Lands, and secondly, the financial gain from car park charges are to be used for resource protection;
- Visitors' willingness to pay for car parking is affected by several factors, including their overall satisfaction, length of stay (stay overnight or not), first-time or repeat visit to the site, geographical origins of their residences, visitor group composition, their economic status and age;
- There should be positive relationship between visitors' receiving relevant information and the formation of intentions to behave in a desired manner - if visitors are provided with information with negative impacts upon resources resulting from inappropriate visitor use, they are more likely to modify their activities to be more appropriate.

1.4 RESEARCH CONTRIBUTION TO THE MANAGEMENT OF TOURISM DESTINATIONS

Visitor management strategies have been practised in many tourism destinations. However, there is a lack of consistency in the application of visitor management. For instance, there is a vast amount of printed materials including guidebooks and maps available in high street book shops as well as in the destinations. However, updating the information contents in printed materials may be infrequent. The use of the Internet to distribute information is becoming common, yet again it is often the case that web pages are not updated regularly. Furthermore, signage deteriorates as a result of wear and tear and vandalism, and out of date audio-visual programmes and exhibitions are just few more examples of the inconsistent use of visitor management. On the other hand, it is possible that site managing agencies overly relying on the use of enforcement to manage visitors' activities, which is likely to lead to visitors' decreased experiences in the site.

Visitor management strategies are rooted in understanding how people learn and how their behaviour can be modified. These strategies require effective communication channel to deliver the appropriate information and messages to visitors. Hence, the study of visitor management techniques is a study of a combination of communication, learning and behavioural modification as well as tourism management. However, most of the existing literature and case studies of visitor management techniques is fragmented and focused on individual components instead of the underpinning knowledge of the counter-balance and interrelated connection of the various strategies of visitor management practice. For instance, some researchers stress the provision of interpretive/educational information as a main method to encourage visitors to adopt more appropriate activities in a destination. Some suggests that one form of media is more effective than another in delivering information to visitors. Some believes that the desired behaviour can be induced if visitors can be made more aware of the value of resources. Some stress the importance of hardening resources in order to prevent the potential damage resulting from tourism activity. In fact, all of these are important

functions of visitor management and they should be integrated as a complete visitor management practice.

The research is designed with the purpose in mind that the study of visitor management strategies will contribute to the understanding of visitors' viewpoints of these strategies that are designed to tackle their activities in a tourism site. What do visitors want to know and where from? How do they respond to management actions? Is their experience increased because of visitor management? Do visitor management strategies assist in the protection of resources in destinations? These are the research questions that were identified for exploration and if successful, the results will benefit the destination managing authorities. If tourism destination agencies can understand more of what their visitors' viewpoints are, with respect to the visitor management strategies that are used in the destination, they will be able to modify their existing management to be more effective. Subsequently, it is a win-win situation for the resources and visitors' experience, and the development of tourism in a site can be managed for a long-term use.

There were limited information or activities that focus on stimulating visitors' willingness to engage in more appropriate behaviour in place in the New Forest when the survey was carried out in 1999. The researcher wanted the New Forest managing organisations to benefit from the research findings: enabling them to determine whether it is worthwhile investing more funds and human resources into developing schemes and techniques that can encourage visitors to behave in a more resource friendly manner at the site.

1.5 LAYOUT OF THE THESIS CHAPTERS

Following the Introduction, Chapter Two examines the strategies of visitor management that are practised in tourism destinations worldwide. These strategies are divided into two main approaches: hard and soft visitor management. The hard management approach focuses on the use of enforcement, economic incentives and

disincentives, and resource alteration to modify visitors' behaviour and to channel and control visitors' flow. Information provision, visitor codes and a variety of education oriented programmes fall into the category of soft approach of visitor management. The objectives of visitor management are explored and the functions of these strategies are discussed, together with examples of the practice of those techniques. The exploration of visitor management strategies leads to the reasoning of the importance of effective communication with visitors and the need to understand the factors that influence people's behaviour formation.

The theories of learning and behavioural modification that are applied to the various techniques of visitor management are examined in Chapter Three. These theories include conditioning, observational and cognitive learning. The enforcement function of the hard visitor management technique relies on an understanding of operant conditioning, and the demonstration effects and social influences from others can be explained by observational learning style. In addition, cognitive learning provides the foundation for various researchers' suggestion that providing interpretive/educational information to visitors is necessary to induce desirable behaviour. Furthermore, theories and concepts such as dissonance/consonance/irrelevance, affective domain, Model of Responsible Environmental Behaviour, Behavioural Flow Chart, Model of Reasoned Action, and mindful/mindless mental state are discussed. These theories are of learning and behavioural changes with direct reference to the application of visitor management techniques. That is, these theories explain the factors that have influences on inducing visitors' behaviour. From the study of these theories, how to manipulate the factors that affect visitors' behaviour is learned and in turn, a model of inducing desirable visitor behaviour is developed.

Chapter Four explores the types and purposes of communication. In the context of visitor management, communication serves informing, entertaining and persuasive functions. Effective communication with visitors is closely related to successful visitor management. The provision of various types of information to visitors is the informing and entertaining purposes of communication, and the techniques and information used

to aim to modify visitors' behaviour is to persuade visitors to adopt the desired behaviour. In addition, the factors, for instance, receivers' variables and sources' power, that affect the communication process are examined. The sources' power can be seen as the tourism site managing authorities' ability to apply enforcement in the context of visitor management. Moreover, the receiver variables can be referred to the personal factors, such as attitudes, knowledge and actions skills, that can have influences on the formation of desired behaviour. The last section of the chapter is the discussion of the application of persuasive communication in the case of visitor management techniques with reference to some concepts explored in Chapter Three. Examples of the use of persuasive communication in the application of visitor management strategies are examined to demonstrate its effectiveness in the management of a tourism destination.

These three chapters of literature review show the close relationship between a successful application of visitor management techniques and effective communication with visitors. Through communication, visitors are made aware of the information that the site managing agencies deliver to them. Based on an understanding of how and why people modify their behaviour, site-managing organisations are able to manipulate those factors that have effect on the formation of an individual's behaviour to stimulate or encourage visitors to adopt the desired behaviour on site.

Chapter Five is the introduction of the research site - the New Forest. The historical and environmental importance of the site is discussed, as well as its administration, with particular focus on the agencies that manage tourism and recreation. In addition, the available secondary data of the tourism in the New Forest is summarised, such as the annual visits, statistics of accommodation and facilities, visitors' origins, on-site information, and purposes of visit. The current tourism development is explored, and the techniques used by major land managing agencies, such as the Forestry Commission, to counter balance these impacts are also discussed.

The research methodology is discussed in Chapter Six, beginning with the introduction of two approaches of research methodology - inductive and deductive research methods. Research styles, types of data and different methods of data collection are also examined. The notion of population and sample, and sampling methods are also explored in order to seek the most suitable data collection method. The deductive research methods are suitable to carry out the research of the use of visitor management techniques to manage tourism development in resource fragile area, because it is a research of theory testing. Additionally, the review of research styles and methods of data collection highlights the benefits of the combining research method - questionnaire based face-to-face interview with the sampled visitors of the New Forest. Following is the research process of the survey of the New Forest visitors, including the secondary data collection, the selection criteria of the research site, research aims and objectives, research questions and hypotheses, questionnaire design, and the procedure of the survey that was carried out during the course of 1999. Based on the experiences obtained in the pilot study and the information collected from secondary data, the researcher designed and planned the sample size, questionnaire, research locations and the number of survey to undertake in order to reflect the seasonality of the tourism activity in the New Forest. The last section of the Chapter outlines the statistical methods used to analyse the collected data, and the computerised statistical package SPSS version 10 is used to analyse the data.

Research findings are presented in Chapter Seven in the forms of text, tables and figures. To begin with, there is an attempt to explore the number of visitor days per annum made by visitors based on the available secondary data carried out in previous research by other organisations or researchers. The figure proposed by the research results suggests that the excursionists may contribute up to 4.5 million visitor days annually, and the staying visitors who spend at least one night within the boundary of the New Forest District might spend up to 2.75 million visitor days. Following is the background of the sampled visitors, including their demographic information, geographical origins of residences, visitor characteristics, and the mode of transport they used to come to the site. Next in the chapter is the discussion of the findings with

cross references to the literature review of visitor management strategies, theories of learning and behavioural modification and the process of communication and persuasion. The findings suggest that visitors' familiarity of the site has effects on several aspects, including their decision making process, perceptions of the quality of tourism facilities, reasons for visiting the Tourist Information Centres, awareness of visitor codes, and effectiveness of the media used in the site to communicate with visitors. Moreover, the findings point out that there is a link between visitors' receiving relevant information and their formation of intentions to engage in desired behaviour/activities. That is, providing well-selected information to persuade visitors to modify their behaviour to be more appropriate is possible.

Last but not least, Chapter Eight is the concluding chapter. Sections in this chapter coincide with the flow of research analysis and findings presented in Chapter Seven. This chapter aims to provide the overall implications of the research findings with respect to visitor management techniques in the research site. There are four main sections in the chapter, namely visitors' profile, the effectiveness of communication with visitors in the research site, visitors' perceptions of the applied visitor management techniques and preferences of media, and the potential of visitors' modification of behaviour. Some suggestions are proposed based on the implication of the research findings attempting to maximise the visitor management techniques in the New Forest.

CHAPTER TWO

VISITOR MANAGEMENT

INTRODUCTION

Visitors and tourism resources have a symbiotic relationship. Visitors come to a tourism destination to experience the site (Ceballos-Lascurain, 1997; Fennell, 1999; Goodwin, 1996; Ingram and Durst, 1997; Lawton and Weaver, 2000; Valentine, 1992), and because of visitors' interests in the resources of the site the need to protect them is recognised. However, it is unlikely for visitors to have closer encounter with tourism resources without causing some forms of negative impact (McArthur and Hall, 1996a; Roggenbuck, 1992). The degradation of resources, in turn, might spoil the quality of the resources and visitor experience. The factors that produce negative outcomes of tourism activity in a destination are often associated with visitors' inappropriate behaviour resulting from their unawareness of the sensitivities and values of the site. It is suggested that the lack of public support for conservation results from ignorance, or a lack of accurate information. Hence, if people were made more conscious of the value of the resources they enjoy and consume, they would appreciate their environment more (McNeely, in Ham, 1992).

Making visitors more aware of their activities and the values of the resources requires sufficient and effective information delivery, which relies on a fluent communication channel between visitors and site-managing organisation (Cooper, 1991; Ham, 1992; Moscardo, 1996, 1999; Pierssené, 1999; Tilden, 1977). In other words, managing visitors implies not only controlling visitors' activities, but also educating them. Visitor management is a practise of ensuring visitors achieve high standards of experience whilst assisting the management and maintenance of the tourism resources (McArthur and Hall, 1996a). There are various strategies employed in visitor management, such as physical control of visitor movement and activities, pricing,

transportation schemes, and environmental interpretation. In this chapter, the exercise of visitor management in tourism destinations is outlined. In addition, the use of environmental interpretation, its application and potential, as well as its possible drawback, will be examined more extensively.

2.1 TOURISM DESTINATION MANAGEMENT

A unique characteristic of tourism is that of simultaneity of production and consumption (it is consumed where it is produced) (Cooper et al, 1998). That is, one has to go to a destination to carry out the tourism activity - the destination cannot be sent to the consumer (i.e. visitor). Hence, the management strategies in a tourism destination need to be well planned and implemented, because often the destination is sensitive to inappropriate use. Whether the destination is of an indoor type, such as museums, stately homes and art galleries, or an outdoor attraction, such as national parks, beaches, mountains, forests and historical monuments, the influx of large volume of visitors can have devastating effects on the objects that attract visitors' interests. Examples of destinations suffer from inappropriate use are abundant: colours on buildings, furniture, wall carving and paintings in museums and stately homes fades due to the increased humidity produced by visitors' breathing as well as by their touch. Soil on tracks and walks in national parks are compacted because of over-use and lead to erosion, drainage difficulty and inevitably alter the vegetation. The feeding habits of wildlife gradually change that such incidents of animals raiding rubbish bins and campers' tents in search for food have been reported. This not only puts visitors in danger of the possibility of being attacked by wild animals, animals' survival ability in the wild when there is no human's food to feed on is also reduced.

Managing a tourism destination is not sufficient if the focus of the management strategies is concentrated only upon the resources (Cooper et al, 1998; McArthur, 1994; Hall and McArthur, 1996a). As mentioned previously, visitors' inappropriate use of the tourism resources have direct effects on the degradation of the objects. In other words, resource management is unlikely to have the desired results unless

visitors' activities are managed and regulated. One may suggest that since visitors play such a role of "bad guy" to the resources in a tourism destination, stopping tourism development may be the ideal option to protect the destination from being spoiled. However, this is neither possible nor logical. Tourism resources often are human heritage. Historical monuments, arts, buildings and landscape are the results of human history over the centuries. Moreover, destinations such as mountains, beaches and forests provide people a place to retreat from their daily routine. The need for experiencing tourism resources is unlikely to diminish, but visitors' choices of destinations may be influenced by factors such as trends, constraints on time and financial ability, and fears about terrorism.

On other hand, tourism resources benefit from the development of tourism. Tourism development brings in financial gain, which, in turn, can be used for resource management and protection. Tourism also contributes to the destination's community by way of reviving the local economy. Visitors' interests in the resources can increase the respective authorities' awareness and support for resource protection. In short, tourism is not always bad and visitors should not carry all the blame when the development turns unpleasant. Management strategies should be well planned and implemented to ensure the destination benefits from tourism development, and visitors' experiences are of enjoyable and of high quality. The table below provides the summary of the relationship between tourism and resources (See Table 2.1).

Table 2. 1: Tourism in relation to resources.

Tourism to resources	Resources to tourism
<p>Opportunities</p> <p>Commercial gains for management and conservation of resources</p> <p>Increased awareness and support for resource conservation</p> <p>New use for redundant buildings and land for developing tourism</p> <p>Threat</p> <p>Intrusive and unregulated tourism development</p> <p>Traffic congestion</p> <p>Disturbance and physical damage on resources</p> <p>Pollution and resource consumption</p>	<p>Opportunities</p> <p>Scenery and heritage as visitor attractions</p> <p>Educational values of human history</p> <p>Threat</p> <p>Off-putting environment</p> <p>Pollution hazards on beaches, in water and in rural and urban areas</p> <p>Intrusive development by other industries</p>

Source: Derived from Cooper et al, 1998.

2.1.1 The Notion of Sustainable Tourism Development

The term “sustainability” is defined in the Brundtland Report (World Commission on Environment and Development, 1987, p. 8) as “meeting the needs of the present without compromising the ability of future generations to meet their on needs”. The concept of sustainability in tourism can be effectively implemented in management strategies only if development is for long-term and the consumption of tourism does not exceed the capability of a host community to provide for future visitors (Cooper et al, 1998). Based on the Rio Declaration on Environment and Development, World Travel and Tourism Council and World Tourism Organisation provided the following guidelines for developing sustainable tourism (WTTC/WTO, 1995):

- Travel and tourism should assist people in leading healthy and productive lives in harmony with nature;
- Travel and tourism should contribute to the conservation, protection and restoration of the Earth’s ecosystem;

- Travel and tourism should be based upon sustainable patterns of production and consumption;
- Nations should cooperate to promote an open economic system, in which international trade and travel and tourism services can take place on a sustainable basis;
- Travel and tourism, peace, development and environmental protection are interdependent;
- Protectionism in trade and travel and tourism services should be halted or reversed;
- Environmental protection should constitute an integral part of the tourism development process;
- Tourism development issues should be handled with the participation of concerned citizens, with planning decisions being adopted at the local level;
- Nations shall warn one another of natural disasters that could affect tourists or tourist areas;
- Travel and tourism should use its capacity to create employment for women and indigenous peoples to the fullest extent;
- Tourism development should recognise and support the identity, culture and interests of indigenous peoples;
- International laws protecting the environment should be respected by the travel and tourism industry.

2.1.2 The Notion of Carrying Capacity

Carrying capacity and sustainable tourism development has long been discussed in tourism literature. One may say that the heart of the sustainable concept is the understanding of carrying capacity. The concept of carrying capacity rooted in the aspect of land use, especially with respect to the number of animals a given plot of land can carry (Boo, 1990). It emerged in the context of recreation in the 1960s as pressure on rural recreation resources increased (Patmore, 1983). Four types of carrying capacity are identified with respect to tourism and its related management,

namely physical, psychological, biological and social carrying capacity (See Table 2.2).

Table 2. 2: Types of carrying capacity.

Physical carrying capacity

It is related to the amount of suitable land available for facilities, and also includes the limited capacity of the facilities, for instance, parking spaces, or bed spaces in accommodation. It is straightforward measure of all types of capacity, and can be used for planning and management, for example, by limiting parking spaces at sensitive areas.

Psychological carrying capacity

It is also called perceptual carrying capacity. Such capacity is exceeded when a visitor's experience is significantly spoiled. It is an individual feeling and difficult to influence by management and planning.

Biological carrying capacity

Biological carrying capacity refers to the level of tolerance the ecosystem a destination possesses. Such capacity is exceeded when damage or disturbance on the resources becomes unacceptable. Such damage includes the changes of habits in wildlife and the alteration of flora and fauna habitat. When measuring the biological carrying capacity, it is important to consider the ecosystem rather than the individual elements.

Social carrying capacity

The concept of social carrying capacity is derived from the notions of community-based tourism planning and sustainability. It attempts to define the levels of development which are acceptable to the host community.

Source: Derived from Cooper et al, 1998.

The Countryside Commission (1970, p. 2) defines recreational carrying capacity as “the level of recreation use an area can sustain without an unacceptable degree of deterioration of the character and quality of the resource or of the recreation experience”. Moreover, Mathieson and Wall (1982, p. 21) define carrying capacity in the context of tourism as “the maximum number of people who can use a site without an unacceptable alteration in the physical environment and without an unacceptable decline in the quality of experience gained by visitors”. Two major concerns arise from such definitions, and researchers argue that the carrying capacity concept fails to generate practical limits to visitor use (Newsome et al, 2002; Sofield, 2002).

Firstly, carrying capacity is often a management decision - site-managing authorities decide what alteration or deterioration in the tourism environment is unacceptable. Visitors, on the other hand, determine when their level of their visit experiences declined (Cooper et al, 1998; Hendee et al, 1990; McCool and Patterson, 2000; Stankey et al, 1990; Urry, 2002). Secondly, although the level of usage of the resources is taken into account to determine the capacity of a destination, the number of visitors should not be used as the precursor of the level of uses of the resources (Wight, 1998). That is, inappropriate activities carried out by a small number of visitors, for example, littering, lighting fires in woods, poor parking and off-road driving, and poaching wildlife or removing vegetation species, can cause more harm to resources than a larger number of visitors who observe and practise regulations imposed by the site-managing agencies. In other words, it is arguable whether the number of visitors is a sufficient indicator to measure the carrying capacity of a destination. Although the increased influx of visitor flows certainly intensifies the pressure on the resources at a site, visitors' inappropriate behaviour accelerates the process of negative alteration on resources further (Haas, 2001).

2.1.3 Leisure, Recreation and Tourism

Leisure, tourism and recreation are usually viewed as a set of interrelated and overlapping concepts. There is no a universally accepted definition of leisure, tourism and recreation so far, and researchers change definitions to suit the purposes of their studies (Hall and Page, 1999).

According to Herbert (1988), leisure is seen as a period of time over which an individual exercises choice and undertakes activities freely and voluntarily. The emphasis of leisure has shifted from the study of leisure activities to exploring the importance of individual perceptions of leisure (Glyptis, 1981; Herbert, 1988). Based on this broad concept of leisure, tourism and recreation are generally regarded as subsets of leisure (Coppock, 1982; Herbert, 1988; Murphy, 1985). During leisure time, an individual's other obligations are at a minimum, and recreation can be seen as the

pursuits engaged during this particular period of time. In the recreational activity spectrum, at one end activity can be the undertaking of recreation at home environment, through to tourism activity that involves in staying overnight away from home (Cooper et al, 1998). In short, recreation activities and most tourism in the world are leisure activities (See Figure 2.1).

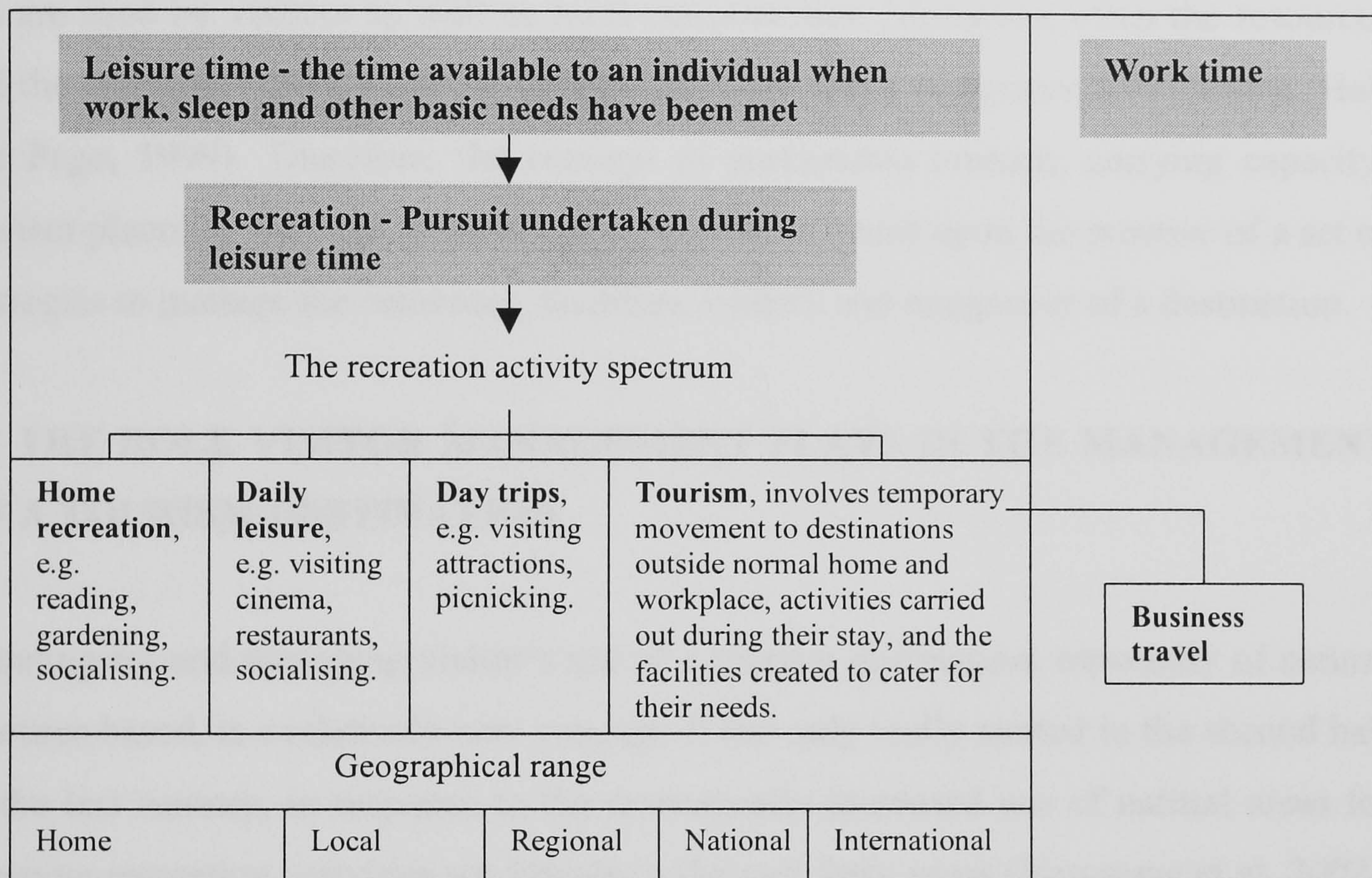


Figure 2. 1: The relationship between leisure, recreation and tourism.

Source: Boniface and Cooper, 1987.

The boundary between tourism and recreation activities is not clearly distinguished. Referring to the above figure, it is obvious that tourism can be splitting into domestic and international tourism. Nevertheless, activities carried out during an individual's leisure travel to a destination, regardless abroad or in the home country, are in fact "recreation activities", such as visiting attractions, restaurants and cinemas, reading a book or watching television, relaxing and participation in outdoor activities. Moreover, the inclusion of same day travel - excursionists, in the official guidelines for the collection of tourism statistics makes the divide between recreation and tourism even more arbitrary (United Nations, 1994).

The objective of this research is not to define leisure, tourism and recreation. Instead, the researcher wishes to stress the interchangeable nature of the terms “outdoor recreation” and “tourism” in this study. With respect to the discussion of visitor management which to be followed, the argument of the distinction between recreation and tourism seems unnecessary. Nonetheless, it is necessary to point out that either tourism or outdoor recreation, resources in the destination where the activity is carried out are used by visitors as well as local communities. Moreover, often the resources and the available outdoor activity opportunities are major components of tourism (Hall and Page, 1999). Therefore, the concept of sustainable tourism, carrying capacity, tourism planning and management can be said to be based upon the practise of a set of strategies to manage the resources, facilities, visitors and manpower of a destination.

2.2 THE ROLE VISITOR MANAGEMENT PLAYS IN THE MANAGEMENT OF A TOURISM DESTINATION

Planning for and managing visitor’s use of a tourism destination, especially of natural resource based, is a relatively new concept. It has only really started in the second half of the last century, in response to the dramatically increased use of natural areas for pursuing recreation activities worldwide in the past forty years (Newsome et al, 2002). Since the 1960s, people have enjoyed increased leisure time and mobility due to the development of motor technology as well as the growth of private car ownership. These factors put many natural areas within easy reach by a large and increasing proportion of the population. Furthermore, the stress resulting from the busy urban life of which many people feel makes many tourism destinations highly needed and welcomed retreats by these city dwellers. Visitors’ uses of the resources, whether in a pristine wilderness, semi-natural areas such as many of the English countryside, or in a tourist resort complex, can potentially downgrade the quality of the resources, which, in turn, is likely to lead to reduced visitor experiences (Hall and McArthur, 1996a; Lindberg et al, 1997; McArthur and Hall, 1996a). Moreover, conflicts between different visitors may arise due to their competition for particular resources. For instance, walkers and cyclist, or cyclists and motorcar users or horse riders, may

compete the use of a particular track. Hence, planning for and managing visitor uses of resources is essential in order to ensure the quality of the resources is maintained and visitors' experiences are of enjoyable (Newsome et al, 2002; Shackley, 1998). And, it is necessary to focus management upon both tourism resources and visitors if the tourism activity is for long term development.

The pressure and impacts on the tourism resources resulting from inappropriate visitor use can be controlled and minimised by applying carefully planned and implemented visitor management strategies. In other words, the management plan of a tourism destination should consist of ecological and biological-oriented resource management plans as well as visitor management plans. Moreover, plans for resource and visitor management should not be designed and implemented separately but instead should incorporate the two to form a complete plan for site management (Cooper et al, 1998). This is because inappropriate visitor use will lead to degraded resources over a period of time, regardless how well the resource management plan functions. For instance, wanting to protect a particular bird species during its breeding season, special actions such as providing artificial nests to encourage the number of successful hatching are practised. However, if visitors are not informed of such practice and diverted away from the birds' territory, they may disturb the wildlife unintentionally. On the other hand, fencing off the access to the site without explaining to visitors the reasons of such management action is likely to cause dissatisfaction. Therefore, effective visitor management can be seen as an essential component of successful resource management, and without appropriate visitor management plan, a tourism destination may be likely to suffer from unacceptable resource degradation.

Researchers argue that if visitors receive enjoyable and enriched experiences, they might appreciate the resources more and, further, they may support the management schemes in a tourism site. It is believed that the more the visitors understand and support the site management strategies, the easier to manage and protect tourism resources (Bramwell, 1991; Hall and McArthur, 1996a; McArthur, 1994; Moscardo, 1996). The well managed tourist facilities and tourism resources are one of the key

elements to increase visitor enjoyment and experience. The research carried out by Vander Stope and Gramann (1987) proved that a site that shows a lack of maintenance, such as littered ground or vandalised facilities, is more likely to “invite” depreciated visitor behaviour, since visitors may consider that their violations are normative (Ward, 1973).

A simple and straightforward statement to best explain the reason for applying visitor management in resource based tourism destinations, such as national parks, reserves, and historical monuments, is that visitor management aims to maximise visitors’ experience while minimising the impacts caused by visitor activities (Cooper et al, 1998; Lane, 1991; McArthur, 1994; McArthur and Hall, 1996a; McCool, 2002). In Table 2.1, it shows clearly that tourism resources can benefit from the development of tourism, subject to appropriate planning and management strategies are implemented. There are already many television documentaries and literature serve as educational tools to increase people’s awareness of these resources relating to human history. Nevertheless, these “indirect, impersonal” experiences of resources received via various types of media is not sufficient to replace the actual, direct and personal encounters visitors can obtain when they go to the site. However, whether visitors should be allowed to directly experience such resources is still much debated among tourism researchers and scholars. But researchers stress that providing visitors with access to the resources and increasing their experiences of them is more likely to protect the resources in the long term (Hall and McArthur, 1996a). As Hall and McArthur suggest (1996a, p. 3):

“Preserving heritage is dependent on a political process influenced by community attitudes, which are derived from a collection of meaningful experiences. Vicarious appreciation through television documentaries and books is an important element in public education and awareness but it is not sufficient by itself to ensure that areas, objects or cultural practices are conserved. Therefore, it is only through the provision of

positive visitor experiences that heritage preservation can, in the long term, be provided and heritage passed on to future generations”.

The interaction between visitors and resources may not be observed directly, however, by monitoring and evaluating visitor activities, tourism destination managers can learn how visitors perceive the site (McArthur, 1994; McArthur and Hall, 1996b). For example, studies into visitors’ perceptions of the site, including the quality of facilities, their level of enjoyment, the activities they participated in, and what they consider necessary to improve, can help site-managing authorities to identify the necessary management strategies. Such research also helps to identify the credit of current management strategies, which, in turn, is an essential indication for future management plans.

2.2.1 The Objectives of Visitor Management

Visitor management aims to enhance the visitors’ experience and their understanding of the destination while sustaining the quality of tourism resources. Moreover, its utmost goal is to foster a sense of civic responsibility and pride for resource protection (Cooper et al, 1998; McArthur, 1994; Hall and McArthur, 1996a). The task of tourism resource management for long-term use will be much easier to achieve if the general public has access to experience and appreciate the resources, furthermore, to believe that it is everyone’s responsibility to protect the resources. Therefore, visitor management is considered to be a true tool of sustainable tourism management as it ensures that the visitor receives a high quality experience, whilst encouraging visitors to adopt more appropriate behaviour to prevent the destination from degradation. McArthur (1994) suggests the relationship between the management of tourism resources and visitor management is symbiotic, that better resource management is derived from effective visitor management.

It is essential to integrate visitor management to complete a tourism development plan (Grant, 1994; Inskip, 1991; Lane, 1991). This is because that the management for

visitor activities plays a vital part in successful tourism development, and, the tourism resources can only be protected for long-term use if appropriate management strategies and policies are developed and implemented (Hall & McArthur, 1996a). However, visitor management is often viewed as a strategy that can be added at a later stage rather than being integrated into the master tourism development plan (Cooper et al, 1998). This is due to the belief that visitor management is thought to be a practitioner-based technique with few well-documented case studies and sound implementation manuals, and, it is not really recognised by tourism planners and consultants (Cooper et al, 1998; Grant, 1994). In addition, McArthur (1994, p. 13) argues that tourism destination managers tend to put more emphasis on the resources than on the visitors. He indicates that “visitor management budget(s) ... are taken up with creating and maintaining infrastructure, rather than providing the human and financial means to undertake long term planning and evaluation of visitor services”.

Researchers suggest a few possible reasons of why site-managing authorities consider that putting resources before visitors may be practical and philosophical, such as (McArthur, 1994):

- A poor understanding of the link between visitors and resources;
- A belief that it is easier to manage the resources than the visitors;
- A lack of support from senior or higher managing authority to develop long-term visitor management strategies;
- The staff background is often natural science rather than social science, which may fail to interpret and respond to community values of the resources.

It was considered to be easier to manage resources than to manage visitors since resources are relatively static and passive, but the characteristics of visitors are dynamic and may vary significantly. However, the management effort can be limited if there is a lack of knowledge in visitor activity and expectation. Furthermore, research into visitors is a study of more sociology orientated than natural science orientated. It is certainly necessary to understand the value of resources in natural

science or archaeological terms. Yet, the value needs to be recognised by the public if the large-scale appreciation and support is to be developed, that is, the value should be responding to the concerns of the whole community to gain support of resource protection and conservation. Thus, it relies on an understanding of social science not natural science to connect the value of resources with the interests of our community (McArthur, 1994; McArthur and Hall, 1996b).

According to Inskip (1991), the main objectives of planning for visitor use are to ensure that:

- Visitors would have ample opportunity to enjoy, appreciate and understand the features of the attraction;
- Visitor use does not reach a level which results in excessive congestion that detracts from visitor enjoyment of the features and leads to further visitor irritation;
- Visitor use does not result in the degradation of natural or cultural environment of the resource;
- Residents of the area are not prevented from visiting and enjoying the attractions.

The concept of visitor management puts emphasis on positive planning and provision of information and interpretation, instead of mere negative restrictions and prohibition, which usually cause visitor dissatisfaction and misunderstanding of the purpose of regulations. Visitor management is defined as “an ongoing process to reconcile the potentially competing needs of the visitor, the place and the host community” (Tourism and the Environment Task Force Report, quoted in Grant, 1994, p. A-41). It is suggested a feasible and achievable way of minimising the negative impacts of tourism activity, maximising the benefits, and harnessing the chances to use tourism as a positive environmental force (Grant, 1994; McArthur, 1994). The objectives of visitor management include:

- Enhancing the visitor experience;

- Increasing visitor awareness and understanding of destination culture and nature, as well as conservation and environmental issues;
- Inducing civic responsibility and pride;
- Encouraging visitors to adopt more responsible behaviour towards local culture and nature;
- Increasing the chance of repeat visits;
- Spreading the visitor flow over a wider geographical area;
- Directing visitors away from, and/or to lessen visitor length of stay in, sensitive areas;
- Promoting visits to less visited areas;
- Encouraging off season visits to minimise seasonality impacts and reduce traffic and noise pollution during the peak;
- Encouraging higher visitor expenditure.

(Derived from Bramwell and Lane, 1993; Cooper et al, 1998; Grant, 1994; McArthur and Hall, 1996a; Millar, 1989; Pearson and Sullivan, 1995; Timothy and Boyd, 2003).

Visitor satisfaction levels are dependent upon the outcome of the match between the visitors' expectations and the experiences available (Driver et al, 1987; Kotler et al, 1996). Therefore, visitor management should not only emphasise the management of products at the site, i.e. the primary management task is not simply to provide the best facilities and services for visitors and locals, but also the creation and enhancement of the visitor experience. A product-orientated management of a destination tends to focus on the operation of facilities and services rather than on the creation and safeguarding of visitor experience. Secondly, it is also possible that the differences between the perceptions of site-managing organisations and visitors concerning the ideal location, design, facilities and maintenance are sometimes considerable (Graham et al 1988). Therefore, there should initially be a focus on visitor expectations and how to enhance their experiences if the visitor management is to be successful.

2.3 APPROACHES TO VISITOR MANAGEMENT

The management of resources and visitors at a tourism destination is interrelated and interdependent. Traditionally, the approaches of visitor management tended to focus on managing the resources and controlling visitors' uses of the resources. These methods are based on a biophysical approach involved with a series of site-based practices to counter the negative impacts resulted from visitor's uses, whilst using regulations and rules to control visitors' activities (Alcock, 1991; Bramwell and Lane, 1993; Ceballos-Lascuráin, 1996; Cooper et al, 1998; Field and Wagar, 1982; Forestell, 1990; Graefe et al, 1990; Grant, 1994; Ham, 1992; Hendee et al, 1978; McArthur and Hall, 1996a). Orams (1996a) suggests this type of visitor management as "hard visitor management". As opposed to the "hard approach", researchers stress that the use of marketing, interpretation and visitor research can be more effective than the hard visitor management approaches in sustaining tourism resources for long term uses as well as enhancing visitors' experiences (Cooper et al, 1998; Grant, 1994; McArthur, 1994; McArthur and Hall, 1996a, McArthur and Hall, 1996c; Orams, 1996a). These methods are termed "soft visitor management".

Cooper et al (1998) suggest two main approaches to visitor management, namely visitor information provision, and influencing visitors' on-site behaviour (See Table 2.3). These approaches are a mix of hard and soft visitor management strategies.

The differences between hard and soft visitor management techniques are that hard visitor management strategies largely rely on resource alteration, applications of rules and regulations, as well as fines and penalties when an unacceptable visitor activity occurs. On the other hand, soft visitor management strategies aim to provide information and interpretation to visitors. Although the management of visitors and resources in a tourism destination may include various regulations and restrictions, soft visitor management strategies limit the use of harsh restrictions and fines and instead advise visitors of appropriate use of resources. In other words, soft visitor management strategies provide essential information to visitors, using a wide range of

media, on the reasons for applying regulations, as well as on directions and activities, and on the features of attractions in a destination.

Table 2. 3: Visitor management techniques.

Marketing and information provision	Influencing on-site visitor behaviour
<p>Withdrawing marketing promotion at peak times and informing local radio stations and tourism information centres when the attraction is reaching its capacity.</p> <p>Encouraging visitors to come during the off season.</p> <p>Providing information on alternative attractions and ensuring that tourism information centres make visitors aware of the full range of attractions available.</p> <p>Targeting specific market segments only.</p>	<p>Visitor orientation centres.</p> <p>Signposts, information points and marked routes.</p> <p>Using tour guides in organised visitor groups.</p> <p>Use of guides, actors in role play and audio cassette tours to channel visitor flows.</p> <p>Temporary closure or restricted access to sensitive sites using barriers, one-way systems and dispersal to less sensitive sites.</p> <p>Introduction of timed ticketing and advanced booking systems.</p> <p>Queue management systems and queue entertainment.</p> <p>Zoning areas or time scheduling for different recreational activities.</p> <p>Managing car parks to direct visitors to alternative locations at the site.</p> <p>Installing on-site transport systems.</p>

Source: Cooper et al, 1998.

2.3.1 Methods of Hard Visitor Management Approach

Hard visitor management methods include (Cooper et al, 1998; Hendee et al, 1978; Graefe et al, 1990; Grant, 1994; McArthur and Hall, 1996a; Orams, 1996a; Timothy and Boyd, 2003):

- Restrictions on access and certain activities;
- Security site personnel/rangers/police;

- Implementation of rules and regulations;
- Discriminated entrance and parking fee charges;
- Zoning; and
- Resource hardening such as construction of boardwalks, reconstruction and repair of heritage buildings and monuments.

Hard visitor management strategies aim to regulate visitor activity as well as to modify the resources so that they are more resilient to impacts resulting from human activities. The danger of the over application of hard visitor management strategies without thorough concern is that the heart of visitor management is to enhance their experience and to encourage their support on resource protection in the tourism destination. Too much emphasis on the adoption of hard visitor management strategies may neglect visitors' needs and wants of enjoying and experiencing the tourism resources. It is suggested that visitors should be adequately advised of the direct and indirect benefits of hard visitor management strategies if the tactics are to be successful (McArthur, 1994).

Biophysical alterations on resources are traditionally used to manage human's interaction with sensitive resources (Burgess, 1992; McArthur and Hall, 1993; McArthur, 1994; Yale, 1991). Hammitt and Cole (1987) point out that the use of resource hardening has long been practised to limit visitor impacts whilst allowing visitors to experience the resources, for instance, building gravel tracks or boardwalks so visitors have restricted access to resources whilst the damage to vegetation caused by compacted soil is reduced. However, the disadvantage of the physical alteration of the resources is that the built structures may not blend in the surrounding environment. This visual intrusion may reduce the aesthetic value.

The table below provides some examples of the hard visitor management that are used worldwide (See Table 2.4).

Table 2. 4: Methods of hard visitor management.

Type of hard visitor management	Actions	Examples
Regulation on visitor activities	Restrict access to and within a site temporarily or permanently	Access via designated routes, site closure temporarily or permanently to allow resources to recover from visitors' use
	Restrict visit duration	Day use, overnight use only areas
	Restrict equipment	No camera in museums
	Restrict group size	Maximum party size to partake an activity
	Restrict style of experience	Require a guide or personnel with certificate of qualification
	Restrict activity	Limiting noise level, no campfire
Economic methods	Charging visitors for access to resources and using facilities	Entrance fees, car park charges, coin-operated binoculars
	Create exclusive use	"Members only" to facilities, or available only to clients from a particular operator
Physical modification of the resources	Restrict access by using barriers	Fencing, banks, ditches and dragon teeth
	Concentrated use of more robust areas	Zoning, concentrating tourism facilities in more resilient areas
	Disperse use of sensitive areas	Avoid development to discourage or divert visitors flow
	Alter physical environment	Construction of tracks, car parks, viewing platforms, modifying vegetation, drainage
	Modify range and number of facilities	Reduce size of car parks
	Reduce visitor demand	Minimal or no maintenance to discourage visitor use
	Develop alternative or move facilities	Construction of replica of resources, use of audio-visual media to present the resources as alternative experiences
Authorisation of site-managing agencies	Raise on-site staff profile	Use of uniform to ensure the identity of the managing agencies, policing, patrol

Source: Derived from Cooper et al, 1998; Inskeep, 1991; McArthur and Hall, 1996a; Orams, 1996a, Timothy and Boyd, 2003.

2.3.1.1 Regulatory methods and authorisation of site personnel

Rules and regulations are usually used to restrict visitor activities, access, times and size of visitor party in a given period of time. Except for preventing resources from being over used, other benefits of the application of rules and regulations include ensuring visitor safety and comfort, managing and operating the site and reduce congestion. However, from a visitor's viewpoint, these restrictions may be seen as elements of dissatisfaction and inconvenience (Buckley and Pannell, 1992; Ceballos-Lascuráin, 1996; Hatten and Hatten, 1988; Jansen-Verbeke, 1997; Jansen-Verbeke and Lievois, 1999; Jones, 1993; McArthur and Hall, 1996a; Orams, 1996b; Richter, 1999; Vander Borg et al, 1996; Yale, 1991).

Complete restrictions on access are difficult to apply, perhaps only in small and specified sites where its significance is nationally or internationally recognised and accepted with zero or little tolerance to visitor impacts (McArthur and Hall, 1996a). One example of such practice is part of the Central Plateau in the Tasmanian Wilderness World Heritage Area which was quarantined indefinitely in 1995 to restrict visitor access in order to reduce the spread of a fungus that kills ancient pencil pine trees (Tasmanian Parks and Wildlife Service, 1995). Nevertheless, it is necessary to consider the financial ability of the local community and the national government when such total control on visitor access is to be implemented. When the country is poor, or relies heavily on tourism to generate income, restriction of access to the resource means no visitors. Despite the value of the resource being seen as significant and the need to control access is recognised, the short-term economic gain from the development of tourism often outweighs resource protection.

More commonly, partial or temporary restrictions are applied in tourism destinations to enable visitors, to a certain extent, to freely explore and experience the resources that attract them to the site. For instance, temporary closure of a site to allow natural resources to recover or regenerate. This is an often used approach in many tourism destinations to ensure resources are not over consumed as well as to safeguard

visitors' safety. The timber plantations (inclosures) of the New Forest where are more robust ecologically than heathland and therefore outdoor activities are encouraged, are closed for public access during the timber harvest season to ensure visitors' safety. In Taipei Zoo in Taiwan, during the breeding seasons of some animals visitors' access to the cage is banned. Seasonal closure of campsites and camping is strictly controlled in designated areas only are other examples of the restrictions. Moreover, outdoor activities such as fishing, sport hunting and mushroom or berry picking are often allowed in many natural tourism destinations, subject to the restrictions on the season, size and species of the wildlife and sometimes licences need to be acquired in advance. Visitors' access to activities and resources are partially restricted to ensure the long-term use of the resources is sustained whilst providing the experiences to visitors. In short, the application of restrictions and regulations attempts to maintain a balance between visitors' experiences of and their impacts upon the resources.

Furthermore, many of the rules and regulations are law-enforced, and the law enforcement is usually undertaken by police, park rangers or security personnel of the site-managing authority. Increasingly harsher penalties are applied in some resource-based tourism destinations, for example, a warning for the first offence, banning from the premises follows, and fines in severe cases of harassment or killing of wildlife and deliberate destruction of heritage (Orams, 1996a). The disadvantage of uniformed personnel enforcing regulations in a tourism destination is that visitors may feel uncomfortable seeing them as "police" in a tourism destination (McArthur and Hall, 1996a). In addition, the human resource and equipment costs might be significantly higher if there is a need to employ security personnel, in particular when the area is large or remote. In many national parks with high seasonality, park authorities usually employ seasonal staff during peak time to counter increased visitor demand and protection of resources. Park authorities may be reluctant to invest on part-time staff training because of its high cost, which may result in the insufficient skills of part-timers to handle visitor needs and to advise visitors of appropriate recreational activity effectively.

The “police” role of site personnel is in fact effective to enforce visitors complying with the regulations. Imposing restrictions and regulations does not necessarily lead to modified visitor behaviour. However, when a visitor is carrying out inappropriate activity, for example, lighting a campfire in a bush, a uniformed site personnel patrolling and advising them to put out the fire is more likely to make them do so. The power of authority is seen in an individual’s daily life, and the sighting of authorised personnel is usually effective in enforcing the regulations. For instance, an individual driving along a road within the regulated speed limit. When they see police standing by the roadside, they would often reduce their speed.

Inevitably some visitors may feel uncomfortable, disoriented or disappointed due to these changing management tactics. In order to tackle the problems of visitors’ dissatisfaction resulting from the application of law-enforced restrictions, such information should be delivered to visitors prior to and during their visits to the site. For instance, where there is a specific restriction on access and routes, an on-site management plan should be prepared in order to indicate appropriate access and exit points in order to smooth visitor flow through the site. Information of the closure of facilities or particular areas or the whole destination, whether there are other alternatives, location, direction, and opening times, should be given to visitors via different media. Moreover, the site-managing agencies are likely to face the problem that the increased demand once the restrictions of access to a site or activities are lifted. The use of advance booking system and setting up the maximum number of visitors to a particular location in a given time can be used to manage the demand.

Although the researcher stresses that the application of carrying capacity in a tourism destination is not an ideal management approach, in conjunction with other visitor management approaches, setting the threshold of maximum number of visitors in a given time is commonly used. Campsites, museums, art galleries, historical monuments, and some highly sensitive destinations such as Green Island in the Great Barrier Reef and New Zealand sub-Antarctic islands, the carrying capacity is common practise to limit the number of visitors with respect to the capacity and sensitivity of

the site (McArthur and Hall, 1996a; Wouters and Hall, 1995). Furthermore, limiting visitor number is also used in many reserves and refugees to control visitor impact upon sensitive resources (Curthoys, 1998). Some sites such as Antarctica and Galapagos Island in Ecuador, where resources are highly sensitive to maintain their balance even when the interface with human activity is relatively low. In such destinations, limiting visitor numbers and managing their behaviour is necessary to sustain the fragile resources.

Site-managing authorities in many of the reserves and parks in fact use tourism activity as an essential mechanism to educate visitors the value of the site and to gain support for resource management, subject to the sustainable use of resources. There are examples of successfully managed sensitive sites providing recreational opportunities to the public while protecting the resources, one is in the Ramsey Canyon Preserve, Arizona, USA (Curthoys, 1998). The Canyon has been recognised as a biologically significant area since the late 1800s and was the first registered National Natural Landmark in the US. Ramsey Canyon is home to hummingbirds and 17 other rare wildlife species, and a riparian habitat with US nationally limited representation.

The management scheme in Ramsey Canyon Preserve is protection-first oriented, and restrictions of visitor numbers and behaviour are the top approaches of the management of the Canyon. Staff recognised that resource protection should not be compromised by the pressure of public demand for visits, although allowing public access to the Preserve is acknowledged to be beneficial as it can increase the support and understanding of the Preserve. The visitor management in the Ramsey Canyon Preserve includes temporary closure of certain sites during critical wildlife breeding and feeding season, limiting visitor numbers, strictly regulating visitor behaviour, and detouring visitors away from sensitive sites. The reported most effective and simplest way to limit visitor numbers is limiting car park space. Visitors are encouraged to book their trips in advance, which allows the Preserve staff keep records of visitor numbers. Although limiting visitor numbers may be seen inconvenience and

unfriendly to visitors, it achieves the main management purposes, that is, protecting resources in the Preserve, which are what visitors are coming for, and safeguarding visitor experience and enjoyment since the resources are being protected (Curthoys, 1998).

Researchers also suggests that the visitors should be informed about the purposes of imposing restrictions and regulations in order to gain their support for such management decisions. As Turner (1994, p. 131) points out:

“agencies ... adapted their approach to their own views of what constituted appropriate use ... it is not surprising that interest groups who perceive they are not adequately catered for challenged the rights of planners to make value judgements about acceptable use of national parks without the concomitant requirement to demonstrate the basis for such decisions”.

McArthur and Hall (1996a) point out that the reason why regulations and restrictions cannot achieve the desired effectiveness is a failure in communication between visitors and managing agencies. According to Prior (1992, p. 13):

“regulated behaviour change can be successful, provided that there is strong public support for such regulations, that they are very carefully explained, and that those affected have some say in the ways in which regulations are out into operation”.

This “informing duty” can be carried out by various media, either personal such as interpreters, guides and site personnel, or via publications, signage, audio-visual media and the Internet (Sharpe, 1982b; Sharpe and Hodgson, 1982; Smith-White, 1982). Providing information to visitors is categorised as “soft” visitor management, which is to be discussed in the latter section. Nevertheless, such divide of hard and soft visitor management although is possible in terms of method-wise, the implementation of

these visitor management approaches is usually interdependent among the hard and soft methods. That is, information of hard visitor management needs to be delivered via soft visitor management (communication and interpretation), and the direct and obvious result of visitor management in a tourism destination is provided by law-enforced restrictions.

2.3.1.2 Economic incentives and disincentives

Economic management strategies attempt to use prices as an incentive or disincentive to modify visitors' inappropriate activities whilst increasing financial gains. They are used widely in tourism destinations, and usually involve discriminating pricing systems to maximise economic gain (Plimmer, 1992). For instance, charging higher entrance fees during peak months but lowering the fees during low season. In so doing, the discriminated pricing system not only maximises the income, it also helps to spread visitor flow more evenly throughout a year. Economic management strategies can be subdivided into two main categories: price incentive approaches and disincentive methods.

Price incentive methods comprise of:

- Reducing fees for entrance and facilities to encourage off peak use;
- Reducing entrance fees for visitors who come to the site by public transport or coach tourists;
- Installing cheaper or free on-site transportation to reduce traffic problem;
- Introducing park-and-ride scheme and offering cheaper or free bus tickets between the car park and the tourism destination to encourage visitors to leave their vehicles outside of the destination.

Price disincentive methods include:

- Applying fines to littering and other inappropriate behaviour;

- Charging higher fees for entrance and facilities during the peak season;
- Charging high parking fees for private car users.

(Derived from Cooper et al, 1998; McArthur and Hall, 1996a; Orams, 1996a).

The provision of on-site public transportation and park-and-ride schemes are two compatible techniques aimed at encouraging visitors to leave their cars behind using the incentives of cheaper or free public transportation provided. For example, in Yosemite National Park, the tram services are provided regularly between several popular attractions. Park visitors can leave their cars in the nearby car parks but still enjoy the convenience of mobility. In many historical towns and seaside resorts, such as Oxford, Stratford-upon-Avon, and Bournemouth, UK, Bruges, Belgium, where parking space is limited, on site transportation and park-and-ride scheme are often the solutions for local residents and visitors (Hicks, 1995). Moreover, the disincentive of charging high parking fees can be introduced to a site where park-and-ride schemes and/or on-site transportation are already in operation to discourage visitors using their own vehicles, whilst visitors still have the choice of using their own cars as they wish (Grant, 1994).

The warnings and penalties for inappropriate behaviour and activities such as littering, speeding, vandalism, animal feeding, wildlife harassment and killing, can be seen posted on signs and other forms of media in many tourism destinations. Nonetheless, it is not always easy to catch the wrongdoers and to fine the person on the spot. In sites which are geographically large and involve various isolated locations and landscapes, it is unlikely to assign staff and rangers to patrol the site on a regular basis. In such a case, such information is more of a warning rather than policing. The disadvantage of warning visitors without imposing the fines on them is that gradually visitors are unlikely to take this warning seriously.

One unsuitable example of the application of price disincentive is that the charges are not high enough to discourage visitors from undertaking particular behaviour. For instance, site-managing authorities wish to protect the historical monuments from

becoming over-exposed to visitors' camera flash, as it causes the colour on buildings, wall carving and statues to fade. In Egypt, warning signs of "no flash" and "no camera" are placed in museums, in and outside of the Pyramids and in the tombs. However, any visitor can use flash to take pictures if they are willing to buy a "camera ticket", which costs very little money (about £3.00), in advance and show the ticket to the guards prior to entering a monument. The researcher had seen a guard of a tomb in the Valley of Kings arguing with a visitor that he should pay him \$5.00 for taking a photo of the wall paintings in the tomb without buying the camera ticket. \$5.00 may be valued a lot in Egypt, however, it is certainly not expensive enough to warn visitors about taking photos inappropriately. Additionally, if the objective of managing those historical monuments is to preserve them, a total ban on using cameras should be imposed instead of using price disincentives on charging "camera ticket" or bribing guards in a tomb.

2.3.1.3 Physical modification of the resources

Physical management strategies are often used in conjunction with regulations to restrict visitor activity and freedom to explore the site by concentrating visitors' uses in particular areas of a destination, which, is argued that may suppress visitor enjoyment and opportunities for self experience enrichment (Cooper et al, 1998; Hammitt and Cole, 1987; Hatten and Hatten, 1988; McArthur, 1994; McArthur and Hall, 1996a; Orams, 1996b). Alterations on resources of a tourism destination is used extensively worldwide (Hall and McArthur, 1996a, 1996d; Yale, 1991). The construction of tracks for walkers and cyclists, fences, car parks and other tourism facilities, aims to not only provide visitors with safety and comfort but also divert the pressure of visitor uses from sensitive areas to more robust ones whilst provide visitors with restrict access to experience the resources. Even though some researchers claim that such diversion restricts visitors' freedom to explore and experience a site, allowing uncontrolled visitor flow entering sensitive areas to freely experience the resources will lead to unacceptable resource degradation and jeopardise the quality of the destination and many other visitors' experiences. Physical management methods

work on both aspects of visitors and resources, and, the desired results are resource protection and visitor safety, comfort and satisfaction.

Other physical alternation methods, where possible, include site duplication, zoning and modification of facilities. For example, in natural resource-based destinations, duplicating a particular site will allow the ecosystem of the original site to “rest” during temporary or permanent closure to regain its own balance. Where the heritage monuments and buildings undergo heavy demand for visit, and, if they can be duplicated, the originals can be closed for extensive repair. This technique can help the conservation work of the original attraction without curtailing visitor experience and enjoyment. However, the debate of duplicating and closure of sites shows the weaknesses of these approaches of visitor and resource management. Despite the loss of visitor’s satisfaction from not being able to see “the real thing”, there is the possibility that visitor flows will be redirected to other locations in the site. This may lead to further resource degradation in the alternative locations. Additionally, it is possible that there might be an increased demand once the original sites are re-opened (McArthur, 1994; McArthur and Hall, 1996a).

Zoning is a land-use controlling technique that is intended to ensure that the development plan and standards are implemented (Inskeep, 1991). In a tourism destination, zoning is commonly used as an on-site visitor control. The advantages of limiting visitor use include promoting the dispersal of use, and reducing conflicts by the separation of incompatible types of visitor activities, for example, fishing and motor-boating (Pigram, 1983). Zoning involves the clustering of compatible activity in designated and selected locations of a site (WTO/UNEP, 1992). For instance, a site with sensitive resources can be divided into:

- Zones of strict protection, or so-called “sanctuary zone”, where human activity is excluded;
- Wilderness zones, where visitors are permitted only on foot;
- Tourism zones, where visitor activity is encouraged in various compatible ways;

- Development zones, where visitor facilities are concentrated for convenient use.

Tourism zones are sometimes subdivided into two areas: for sparse use, where site infrastructure such as roads, trails and simple campsites are allowed for low density visitor use; and for intensive use, where relatively high concentrations of visitors are expected (WTO/UNEP, 1992). In development and intensive use zones, there are usually a cluster of tourist facilities such as information centres, restaurants, cafés, car parks, toilets and shops. These zones are usually designated near the entrance to a site, in some cases, outside the boundary, in order to serve visitors' needs for information and comfort at the earliest opportunity. In particular, tourism information centres play an important role in development and intensive use zones since the staff in information centres may be the only on-site personnel visitors will encounter during their visit to the site. This is usually the case in geographically large and remote sites such as national parks and nature reserves. A warm welcome and assistance provided to visitors can significantly add to the quality of the visitor experience during their visits to the site (Cooper, 1991; Cooper et al, 1998; Grant, 1994; Inskeep, 1991, WTO/UNEP, 1992). Nevertheless, zoning can bring with it disadvantages. Sites where different zones come together can create major problems in the immediate areas adjacent to the zones, especially the case where sensitive zones and tourism/development zones are nearby. The high demand for tourism activity is likely to cause congestion in the surrounding areas of both zones. Therefore, the appropriate density and location of tourism facilities should be carefully evaluated prior to the construction.

2.3.1.4 The review of methods of hard visitor management approach

Tourism resources can be considered as social goods that can be consumed by the public free of charge (Cooper et al, 1998; Musgrave and Musgrave, 1989). As a result, the use of regulations and restrictions to manage visitors sometimes causes dissatisfaction because activities and access to resources are controlled. The demand for recreation and access to tourism resources is unlikely to be halted. Instead of

allowing tourism development to be unplanned and unmanaged, appropriate management strategies should be implemented to tackle the potential unacceptable damage on resources and to enhance visitors' understanding as well as their experiences. A combination of physical construction and alteration of resources at sites and the application of regulations is thought to be the most frequently used management strategy to tackle increasing recreational demand and possible negative outcomes of visitor activity (Orams, 1996a).

Hard visitor management methods are related to and compatible with each other. The application of restrictions, rules and regulations limits visitors' opportunity to explore a site. On the other hand, the introduction of resource hardening, duplication and construction of access to resources such as tracks, boardwalks and viewing platforms allows different activities to be undertaken (with restrictions) whilst ensuring that resources are protected. Moreover, charging for entrance and uses of tourism facilities such as car parks generates revenues that can be used for site management. A discriminated pricing system is a common mechanism to encourage off peak visits and the use of public transport, which may reduce the traffic congestion during peak times and in turn, decrease visitors' frustration. A more proactive approach to spread visitor load and to reduce traffic in a destination is to install on-site transportation to encourage visitors to leave their vehicles behind after they arrived at a site. In short, these methods of a hard visitor management approach function in an incorporated manner and are unlikely to be effective when singled out.

The figure below demonstrates the interdependence of the various methods of hard visitor management approach (See Figure 2.2).

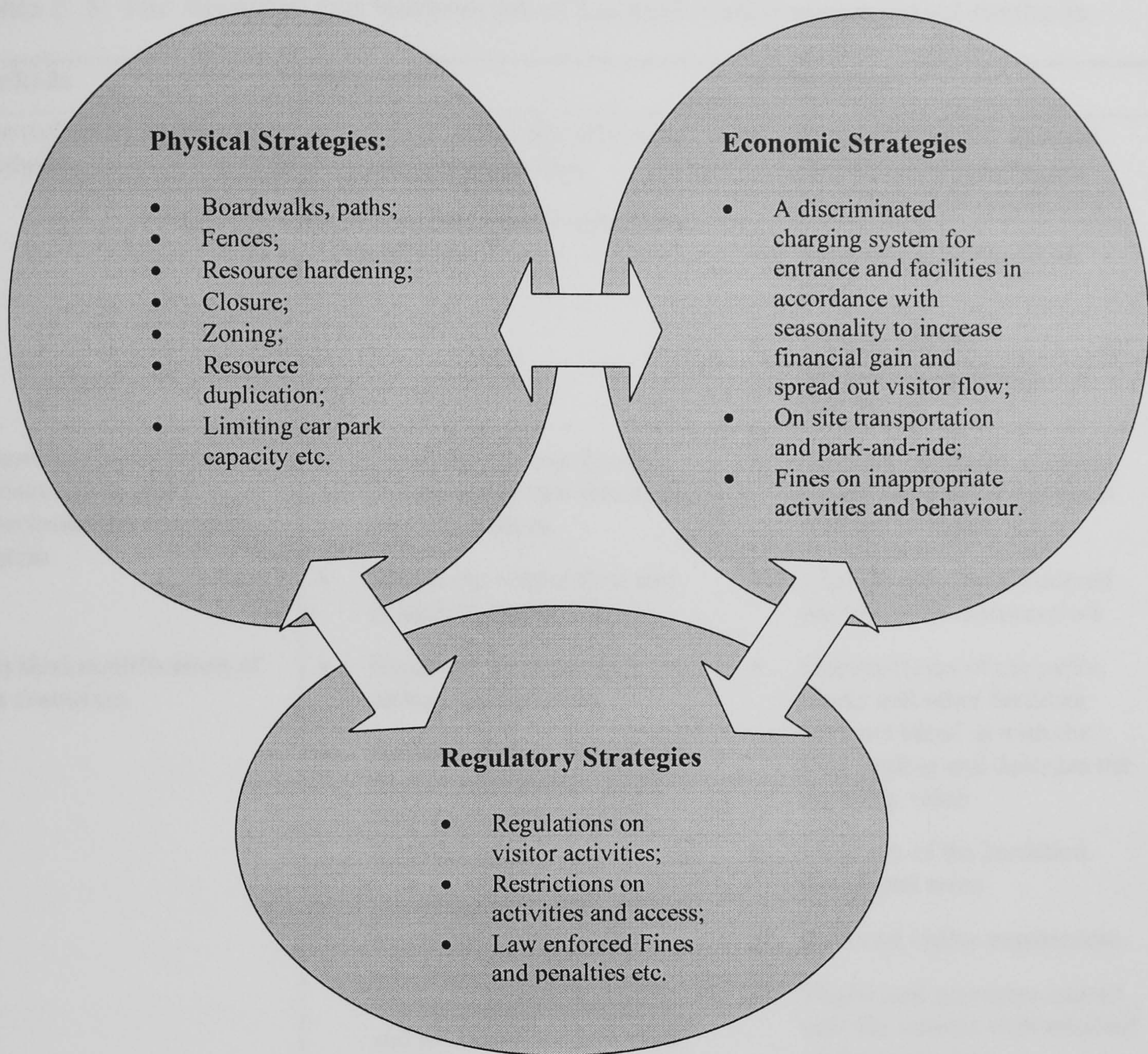


Figure 2. 2: The interrelationships between physical, regulatory and economic visitor management strategies.

The table below is the summary the pros and cons of the various approaches in hard visitor management (See Table 2.5).

Table 2. 5: The strengths and weaknesses of the hard visitor management methods.

Methods	Strengths	Weaknesses
Law-enforced regulatory methods	<ul style="list-style-type: none"> • Direct and visible effects on resource protection • Ensuring visitors safety and comfort 	<ul style="list-style-type: none"> • Controlled visitor freedom leading to reduced visitor enjoyment and satisfaction • Increased administration costs • Visitors lacking understanding of the regulations
Economic incentives, disincentives and a discriminated charging system	<ul style="list-style-type: none"> • Increased revenue through charging entrance fees and uses of facilities • Spread out visitor flow and extended seasonality 	<ul style="list-style-type: none"> • Tourism resources as social goods that market system is difficult to apply • Charges may be considered too low to be disincentives
Physical modification of the resources	<ul style="list-style-type: none"> • Hardened resources can sustain visitor uses • Barriers, fences, designated tracks can diverted visitor flow away from resource sensitive areas • Providing visitors restricted, controlled access to the resources so visitors' experiences are catered for and resources are protected • Duplicating resources where possible so visitors can still experience the resources that attract them to visit the destination 	<ul style="list-style-type: none"> • Constructions of car parks, tracks and other facilities may not blend in with the surrounding and decrease the aesthetic value • Over use of the hardened, developed areas • Reduced visitor experiences • Duplicated resources cannot provide visitors with satisfied visit experiences
Authorisation of policing role to site personnel	<ul style="list-style-type: none"> • Direct effects to enforce the application of regulations • Ensuring visitors' safety and comfort • The use of uniform can raise the profile of the site-managing agencies 	<ul style="list-style-type: none"> • Reduced visitor enjoyment • Increased costs in human resources employment and training

2.3.2 Methods of Soft Visitor Management

Soft visitor management involves the use of communication to deliver a series of messages (information) to visitors. The information ranges from directions,

restrictions and regulations, marketing and advertisement, to educational contents including historical and geographical background of the site (Moscardo, 1999). Soft management approach aims to provide an enjoyable experience to visitors. Meanwhile, the importance of research into visitors can not be neglected, as it enables site-managing authorities identify the level of visitors' uses of the site, changes in visitors' experiences, and to predict potential impacts resulting from visitors' uses in order to undertake management action (Cooper et al, 1998; McArthur, 1994; McArthur and Hall, 1996b). More importantly, the communication characteristic of soft visitor management approach ensures some methods of hard visitor management approach are effectively distributed to visitors. That is, visitors need to be made aware of the restrictions, regulations and the appropriate zones with respect to undertaking activities.

Researchers suggests that visitors should be informed about their responsibility for respecting the local environment and the possible damage caused by their inappropriate behaviour (Ceballos-Lascuráin, 1996; Krippendorf 1987). It is unlikely to lead to visitors' understanding and appreciation if the site-managing authorities provide information merely on directions and regulations. Directorial information consists of no further details of the values of the features at a site, other than how to get there. Although it informs about the correct routes to a particular location, which is helpful to and welcome by the visitors who are not familiar with the destination, it does not inform visitors about the specific aspects of that site. Furthermore, visitors may see regulatory information as instructions and restrictions on them during their visits to the destination. This may be because most of the regulatory information consists of "Don't" messages, for example, "don't feed the animals", "camp fires and barbecues are prohibited". Such information is negative in context and is less likely to lead to visitors' appreciation of the management actions and their satisfaction level from visit may be reduced because of their perceived restrictions upon their freedom to explore the site.

Therefore, the initial concern regarding the use of regulations and restrictions that aim to manage, control and encourage visitors to undertake more appropriate activity is that the visitors should be informed about the reasons for the “Dos and Don’ts” management actions (León, in Ham, 1992). Moreover, it is essential to ensure that information targeted at visitors can be delivered to visitors successfully. Information should be clear, easily understandable, interesting and meaningful, especially the information on directions and the features of the resources of a tourism destination. Carefully selected and presented information enables visitors to understand the site, which may lead to higher level of enjoyment. Many researchers argue that when visitors have enjoyable experiences, and if they are made more aware of the values and sensitivities of the destination as well as the impacts of their inappropriate activities upon the resources, they are more likely to support the management strategies (Bramwell, 1991; CALM and Fisheries, 1994; McArthur, 1994).

Soft visitor management methods includes:

- Information provision to visitors, including directorial, administrative/managerial and interpretive information, and visitor codes;
- Marketing for targeted visitor groups;
- Visitor research and monitoring;

(Derived from Alcock, 1991; Beckmann, 1987, 1988; Ceballos-Lascuráin, 1996; Cooper et al, 1998; Glen, 1999; Grant, 1994; Ham, 1992; Jelinek, 1990; Knudson et al, 1995; McArthur and Hall, 1996a, 1996b, 1996c; Moscardo and Pearce, 1986; Moscardo, 1996, 1999; Moscardo et al, 1998; O’Loughlin, 1996; Orams, 1994, 1996a, 1996b, 1997; Sharpe, 1982a; Sharpe and Hodgson, 1982; Tilden, 1977).

An examination of the above methods of soft visitor management approach reveals that marketing is in fact providing information to targeted visitor groups. Furthermore, visitor research should be undertaken prior to the production of information targeted at visitors, and monitoring and assessment of the effectiveness of the various type of information need to be carried out regularly as the following phase of visitor research. Based on the research and monitoring findings, site-managing agencies can modify the information contents, presentation and media accordingly. In short, the soft visitor

management approach places its emphasis on providing visitors with the information they need during their visits to the site. From the site-managing organisations' point of view, providing such information is a communication process that enables them to make visitors aware of the management actions.

Providing information to visitors is considered as a service and is an essential element of the site management plan (Sharpe and Hodgson, 1982). The basic information provides visitors with a general outline of the site, which can be used to plan their exploration in the site by many visitors. More detailed information that covers the educational content tends to interpret the valuable features of the site in order to enhance visitors' understanding and appreciation of the resources. The information provided to visitors covers a wide range of functions and duties in the management of the tourism destination as a whole, such as:

- Providing hospitable and welcoming messages to visitors, for example, sign posts of welcoming visitors along the routes leading to the site;
- Directorial information helps visitors explore and enjoy their visit safely and quickly;
- Administrative function of providing information on alternative routes and attractions to divert visitor flows away from congested areas and to less busy areas, which helps to smooth visitor pressure on famous spots, and provides opportunities to visitors to explore the whole site;
- Providing administrative information of congestion areas and the possible waiting/queuing times, which can help visitors to plan their trip more efficiently;
- Providing interpretive information to visitors to enhance their understanding of the historical, geographical, cultural and human features of the site;
- Distributing information of regulatory function such as regulations, restrictions and visitors' responsibilities such as keep the site clean and do not disturb wildlife, which reminds visitors of the outcome of their appropriate activities and in turn, helps the management of the resources;
- Presenting the images of the site-managing authorities;

- Enhance the profile of the site-managing authorities by publishing the outcome of their management actions or campaign, such as the reduced number of road kills, the increased number of a particular wildlife or vegetation species.

(Derived from Alcock, 1991; Beckmann, 1987, 1988; Cooper et al, 1998; Grant et al, 1996a; Jelinek, 1990; Keirle, 2002; Moscardo et al, 1998; Moscardo, 1999; Orams, 1994, 1996a, 1996b, 1997; Prentice et al, 1998; Sharpe and Hodson, 1982).

According to the above suggested functions of information, three types of information can be identified: directorial, administrative/management related and interpretive information. The directorial function of visitor information provides information on directions, routes, distance and required travelling time to a particular location at the site. The administrative or management related functions of information assist with resource management by advising visitors the desired behaviour and activities that visitors can participate in. It also functions as a warning with respect to the applied penalties associated with inappropriate activities. Finally, the interpretive function of visitor information aims to reveal the importance and the values of the site to visitors. In other words, interpretive information attempts to provide visitors an insight into the site that visitors can relate themselves to (Ham, 1992; Moscardo et al, 1998; Moscardo, 1999, Olson et al, 1984; Orams, 1994, 1996a, 1996b, Tilden, 1977).

2.3.2.1 Directorial information

Directorial information is often seen in tourism destinations. It plays an important role in assisting visitors to reach the locations they want to visit and channelling visitor flow. Furthermore, it helps to reduce visitors' frustration which tends to occur when they are lost in an unfamiliar environment. Visitors usually want to reach to their destinations quickly and safely. Thus, clear and efficient directorial information is a key factor to improving visitor experience. Directorial information ranges widely, including direction, conditions of road surface, distance and approximately required time for travel, the condition of roads/trails, wildlife that drivers and trackers should be careful of, weather forecast, and emergency contact. This type of information provides visitors with an understanding of the general physical conditions of the

destination, which helps them to plan their stay at the site. Accurate and sufficient directorial information is especially important in geographically remote sites such as some national parks, where the possibility of getting lost is higher and the chance of meeting other visitors or park rangers is relatively low. In such situation, efficient directorial information is essential to the concern of visitor safety and comfort.

Furthermore, directorial information has the function of marketing the less known locations in the site. The information on less visited attractions and routes can promote such areas, it also provides visitors with more opportunities to explore and enjoy the whole destination. In so doing, the pressure on some honey-pots may also be reduced as some visitors are diverted to other locations. Referring to the regulatory method of hard visitor management approach, if a particular area suffers from over-use and requires restricted access to temporarily or permanently, providing directorial information is ideal to divert visitors away from it and guide them to alternative locations. However, the debate of marketing and promotion on less visited areas arises as there would be a possibility of widening negative impacts not only in existing popular honey-pots but also in less known locations. When directing visitors away from honey-pots and sites where they are too sensitive to sustain recreational uses, the alternatives sites suggested in the directorial information should be suitable for visitor uses. Diverting visitors away from one site is not sufficient to be successful directorial information, proper alternatives should be included, or the visitor flow is likely to move to areas where the site-managing agencies want to preserve.

On the other hand, directorial visitor information can help de-promote a heavily used area by not informing visitors about the particular attraction (where this is possible). In the peak season, signs of directorial information can be temporarily removed in order to avoid further marketing the specific attraction. In addition, information relating to the site reaching its carrying capacity in some famous attractions can be placed, which will help visitors to modify and plan their stay accordingly. Yet, the function of de-marketing is not likely to be successful when the attractions are renowned tourism resources (Cooper et al, 1998). In such instances, the hard visitor management method

of duplication of these attractions where possible may be one of the approaches to satisfy visitors. Alternatively, by using various interpretive media to present these attractions may provide visitors with a more detailed view of the site.

2.3.2.2 Administrative and management related information

This type of information includes welcoming messages, timing and scheduling of attractions and staffed visitor centres, and a series of guidelines intended to modify visitors' activities to be more appropriate. As the name suggests, this type of information is designed to help the administration and management duties of the site-managing authorities while ensuring visitors' enjoyment. Some of the administrative information has legal status, such as the law-enforced rules and regulations, which are the methods of hard visitor management approach and were discussed in the previous section. The type of guidelines targeted at visitors, which serve the administrative and management function are generally referred to as the visitor codes. These visitor codes are often voluntary and without legal status to compel visitors to abide by them, although they attempt to regulate and modify visitor activity.

The welcoming messages, operation hours, and timetables of activities and events demonstrate the management efforts and actions of the respective agencies. As stressed previously, the aim of visitor management is to provide high level of experiences whilst the resources are managed and protected to sustain long-term recreational uses. Administrative information of welcoming visitors who come to the site, advising them of the attractions to explore, and the schedule of events to participate in not only enhances visitor experiences through such an overall introduction of the site, but also presents an image of the authorities that are responsible for managing the site. To first-time visitors who are unfamiliar with the destination, this information is a form of orientation, to repeat visitors, it updates them with any changes regarding the opening hours, activities and events.

Visitor codes are not new concepts relating to tourism management. In England, the Countryside Commission produced a Country Code targeted at domestic tourists more than thirty years ago. This code is still in use and advises those who visit the countryside to take their litter home, protect plants and wildlife, and keep water resources clean. There were also a number of visitor codes developed in the 80s and 90s targeted at international visitors, with special concern on the increasing influx of visitors to culture and nature sensitive destinations, including in countries such as Belize, Madagascar, Nepal and Norway. Nonetheless, these more recently developed visitor codes are not much different to the original Countryside Commission code (Mason & Mowforth, 1996).

Visitor codes are usually used to develop visitors' awareness of the values and sensitivities of a destination. Codes for visitors also have another two functions: educating visitors, and being integrated as part of a wider management strategy to ensure the protection of tourism resources (Ceballos-Lascuráin, 1996; Hall and McArthur, 1993; Hall and Page, 1999; Mason, 1994, 1997; Mason and Mowforth, 1996; Splettstoesser and Folks, 1994; Valentine, 1992). For example, the code for Nepal's Himalayas (Figure 2.3) was created and formed as part of an overall site conservation and development project in Annapurna Conservation Area, Nepal (Mason, 1994). It is created by the members of Tourism Concern, a London based British organisation, after consultation with Himalayan tour operators, governments, environmental groups and academics from both the UK and Nepal (Mason and Mowforth, 1996).

THE HIMALAYAN TOURIST CODE

By following these simple guidelines, you can help preserve the unique environment and ancient cultures of the Himalayas

Protect the natural environment

- Limit deforestation – make no open fires and discourage others from doing so on your behalf. Where water is heated by scarce firewood, use as little as possible. When possible choose accommodation that uses kerosene or fuel efficient wood stoves.
- Remove litter, burn or bury paper and carry out all non-degradable litter. Graffiti are permanent examples of environmental pollution.
- Keep local water clean and avoid using pollutants such as detergents in streams or springs. If no toilet facilities are available, make sure you are at least 30 meters away from water sources, and bury or cover wastes.
- Plants should be left to flourish in their natural environment – taking cuttings, seeds and roots are illegal in many parts of the Himalaya.
- Help your guides and porters to follow conservation measures.

The Himalayas may change you - please do not change them

As a guest, respect local traditions, protect local cultures, maintain local pride.

- When taking photographs, respect privacy – ask permission and use restraint.
- Respect Holy places – preserve what you have come to see, never touch or remove religious objects. Shoes should be removed when visiting temples.
- Giving to children encourage begging – a donation to a project, health centre or school is a more constructive way to help.
- You will be accepted and welcomed if you follow local customs – use only your right hand for eating and greeting. Do not share cutlery or cups etc. It is polite to use both hands when giving or receiving gifts.
- Respect for local etiquette earns you respect – loose, light weight clothes are preferable to revealing shorts, skimpy tops and tight fitting action wear. Hand holding or kissing in public are disliked by local people.
- Observe standard food and bed charges but do not condone overcharging. Remember when you are shopping that the bargains you buy may only be possible because of low income to others.
- Visitors who value local traditions encourage local pride and maintain local cultures, please help local people gain a realistic view of life in Western countries.

Be patient, friendly and sensitive
Remember – you are a guest

Figure 2. 3: The Himalayan tourist code.

Source: Tourism Concern, in Mason, 1994; Mason & Mowforth, 1996.

Although the specific objectives that a set of visitor codes is intended to achieve may vary, according to different locations and managing authorities, the principle and application of visitor codes is to promote more appropriate visitor behaviour in the destination. Hence, the visitor codes are in the form of guidelines and advice on

visitors' activities that the managing authorities want the visitors to be aware of. The Himalaya Visitor Code is the example of which developed by non-governmental organisations.

The use of visitor codes can be found in many tourism destinations, ranging from smaller areas such as country parks, national forests and other nature reserves, to large national parks. There are also codes developed at the national level to provide guidelines to both domestic and inbound tourists. One such example of the latter is the Norwegian Government Visitor Code for the Trondheim Region (Mason & Mowforth 1996. See Figure 2.4).

WELCOME

Norway is one of Europe's green lungs, with its wide expanses of virgin land and untouched nature. For generations, we and our guests have been allowed to enjoy Norway's great outdoors without restrictions, not only in the national parks and public recreational areas, but everywhere, from the fjords to the mountains.

You are welcome:

- To hike and ski
- To go camping in the open air
- To go ashore and moor your boat along the coast
- To swim in the ocean, the lakes and the rivers
- To use a canoe, a kayak or rowboat along the rivers and on the lakes
- To pick wild berries, mushrooms and flowers

But, please remember:

- Don't drive your motor vehicle outside the road system
- Don't walk across cultivated fields during the growing season
- Respect other people's privacy
- Don't make an open fire in the woods and fields during the period 15 April to 15 September
- There are special rules which apply to fishing and hunting. You should know these rules.

BE CONSIDERATE

PRESERVE NATURE

Figure 2. 4: Norwegian government visitor code.

Source: in Mason & Mowforth, 1996.

There are also codes designed to tackle the possible damages caused by some popular outdoor activities, for example, walking or cycling, in parks or forests (See Figure 2.5).

The preservation of our parks is vital to the survival of plants and wildlife, so it is important to follow these basic guidelines

Leave all gates as you find them	Protect fences. Use stiles where provided
Don't light fires	Enjoy native animals from a distance
Avoid littering	Don't fish where you shouldn't
Don't take pets to Conservation Parks	Don't spread weeds. Remove burrs from socks before visiting other bushland areas
Respect all water supplies	Always clean your boots after a walk to prevent the spread of disease
Don't pick wild flowers	

Figure 2. 5: The walkers' code in Australian national parks.

Source: Webster's National Parks of Australia. CD-Rom

The application of visitor codes requires close monitoring in terms of how the codes are implemented. In the UNEP (1995) report on Environmental Codes of Conduct in Tourism, it is suggested many of the visitor codes are inappropriately implemented. In the report, it suggests that those who develop codes should carry out assessments of the effectiveness of the codes after they are in position for a certain period of time. Mason (1994) proposed a draft visitor codes for tourism activity in the Arctic and suggested that the effectiveness of the use of visitor codes can be monitored by assessing the following criteria: environmental impact assessment studies in the area prior to and after application of the codes, observation of visitor behaviour and activities, interviewing visitors in situ, and postal questionnaire survey of visitors. In short, the effectiveness of the implementation of visitor codes should present itself in two forms - appropriate visitor behaviour during their visits to the site, and a healthier tourism destination.

Most of the visitor codes are not law-enforced regulations but aimed at visitors' self-voluntary observations of these codes. The purposes of imposing visitor codes in tourism destinations are to raise visitors' awareness and understanding of the site, to

educate visitors about the sensitivity and value of the tourism resources that they have come to explore and experience, and to use the codes to form part of the site management strategy (Mason and Mowforth, 1996). The messages contained in the visitor codes are to minimise impacts resulting from visitors' inappropriate uses of the resources and to promote activities that are compatible with the resources and are therefore encouraged to carry out (UNEP, 1995). However, the effectiveness of the application of visitor codes may be hampered because of the lack of authority.

McKercher (1993) argues that external regulations, for example, imposed by law, may be much more effective than self-regulated visitor codes. This is not difficult to understand as warning and punishment can achieve immediate benefits by preventing inappropriate visitor behaviour and activity from happening in the short term. However, wanting visitors to understand and appreciate the value of the resources in the destination needs more than instructing and punishing visitors. Moreover, referring to the methods of hard visitor management approach, the reduced visitor experiences are the major disadvantages of using regulations and authority to force visitors to comply. Enhancing visitors' understanding and appreciation requires a balanced combination of the law-enforced regulations and other types of information. Thus, visitor codes are imposed to inform visitors about the values and sensitivities of the site and the appropriate activities they can carry out, while using law-enforced regulations to prevent further damage on the resources.

2.3.2.3 Interpretive information

Researchers suggest that visitors' increased knowledge of the site can facilitate a more enjoyable and memorable visitor experience, particularly if the knowledge is carefully selected and presented to visitors in the form of entertaining and educational information (Alcock, 1991; Alderson and Low, 1985; Armstrong and Weiler, 2002; Barrow, 1994; Beckmann, 1987, 1988; Cooper et al, 1998; Grant, 1994; Ham, 1992; Ham and Weiler, 2002; Jelinek, 1990; Knudson et al, 1995; Machlis and Field, 1984; McArthur, 1994; McArthur and Hall, 1996a, 1996b; Moscardo, 1999; Moscardo et al,

1998; Orams, 1994, 1996a, 1996b, 1997; Sharpe, 1982a; Stansfield, 1983; Tilden, 1977; Timothy and Boyd, 2003; Weiler and Ham, 2001). Moreover, visitors may be interested in knowing more about the destination they have come to visit. When a visitor travels abroad to an exotic country it is likely that they would like to know more about the destination, but the same “hunger for information” also occurs when they go to a site that they are unfamiliar with in their home country. For instance, an individual goes to Snowdonia National Park for the first time, information such as its size, wildlife species, location, specific features and aspects, history, folklore and the local community is likely to be sought for, intentionally or unintentionally. Even if a visitor is familiar with the destination, information of a newly discovered animal or vegetation species, archaeological find, results of a project carried out on site and other on-going project may be welcomed by them. Such information serves the interpretive function of the soft visitor management approach. As Tilden (1977, p. 8) stresses the central concern of interpretation is that “interpretation is the revelation of a larger truth that lies behind any statement of fact”, and “interpretation should capitalise on mere curiosity for the enrichment of the human mind and spirit”.

In the context of tourism and recreational studies the terminology “environmental interpretation” is used more commonly than “visitor education”, probably because the word “education” usually carries an undertone of instruction. Also, the term “environmental interpretation” might easily confuse visitors and even researchers in different field, as the conventional meaning of “interpretation” indicates a process of translating a spoken language to another (Hams, 1992; Pierssene, 1999). Instead of translating languages from one to another, in the case of tourism research, interpretation is a communication approach which aims to deliver information from site-managing organisations to visitors (Tilden, 1957, Pierssene, 1999). This type of information ranges widely to include various aspects about the destination, but the main purpose is to increase visitors’ understanding of the site, and in turn, their inappropriate activities are hoped to be modified through their increased knowledge (Cooper, 1991). Furthermore, as Nixon et al (1995, p. 140) point out:

“The educative role of interpretation is not simply to reinforce the familiar or provide the “facts” or “truth” about the past, but to provide a opportunity to encourage the questioning and critical scrutiny of both the past and present”.

Interpretation of a tourism destination has evolved to form an important part of a visitor’s experience. Historically, learning and the search for knowledge has been the driving force of travel for more than three thousand years (McArthur and Hall, 1996c). In many tourism destinations, interpretation is used to achieve the following objectives:

- Enriching visitors’ experiences;
- Increasing visitors’ awareness, appreciation and understanding of the resources;
- Accomplishing site management objectives by encouraging appropriate use of the resources to minimise negative impacts and in turn, reducing the dependent on regulations and restrictions;
- When possible, using interpretation to re-create or substitute experiences without visitors’ going to the site;
- Promoting public understanding and support for tourism resource management.

(Derived from Beckmann, 1988, Ceballos-Lascuráin, 1996; Curthoys, 1998; von Droste et al, 1992; Fishbein and Manfreda, 1992; Herbert, 1989; Howes, 1989; Moscardo and Pearce, 1986; Moscardo, 1996, 1999; O’Brien, 1985; Olson et al, 1984; Orams, 1994, 1996a, 1996b, 1997; Roggenbuck and Williams, 1991; Saunders, 1992; Sharpe, 1982a; Tilden, 1977).

Interpretation is widely adopted in protected areas such as historical sites and national parks, upon which the growing number of visitors places severe pressure. The modern philosophy of interpretation began with Freeman Tilden’s book *Interpreting our Heritage* first published in 1957, which led the American National Park Service to design and implement interpretation in all national parks in the US (Bramwell and Lane, 1993; Knudson et al 1995). Tilden (1977, p. 8) defines interpretation as:

“An education activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.”

Tilden’s definition involves several elements of visitor interpretation:

- It is an education-oriented activity;
- The purpose is to expose the meanings and relationships between human beings and the nature rather than delivering the facts; and
- It needs a medium or media to illustrate factual information.

Interpretation programmes often require facts and figures to clarify the features of the site. However, interpretive information places focus on the relationship between human kind and the resources in order to foster a visitor’s sense of responsibility for the protection of the resources (Keirle, 2002). By communicating this concept, visitors are expected to understand, appreciate and to protect the resources. Tilden (1977, p. 38) points out that “Through interpretation, understanding; through understanding, appreciation; through appreciation, protection”. Although the relationship between interpretation, visitors’ understanding and resource protection may not be a linear one, and many complicated factors are involved within, it is clear that the central principle of interpretation aims to assist resource protection while ensuring visitors’ experiences, which, is the core of sustainable tourism management.

Interpretation is also defined as:

“the process of explaining to people the significance of the place or object they have come to see, so that they enjoy their visit more, understand their heritage and environment better, and develop a more caring attitude towards conservation” (Society for Interpreting Britain’s Heritage, quoted in Moscardo, 1999, p. 5).

Alderson and Low (1985, quoted in Knudson et al, 1995, p. 4) consider that:

“interpretation is a planned effort to create for the visitor an understanding of the history and significance of events, people, and objects with which site is associated”.

Interpretation Australia Association (1995, in McArthur and Hall, 1996c, p. 90) suggests that:

“Interpretation is a means of communicating ideas and feelings which helps people enrich their understanding and appreciation of their world, and their role within it”.

There are other definitions of interpretation suggested by researchers and organisations. The table below provides some of the definitions collected in various literature (See Table 2.6).

Table 2. 6: Definitions of interpretation.

“the communication process which aims at helping people to discover the significance of things, places, people and events... helping people change the way they perceive themselves and their world through a greater understanding of the world and themselves”. (Colonial Williamsburg USDA, in MacFarlane, 1994, p. 10).

“creating an experience or situation in which individuals are challenged to think about and possible make decisions concerning natural resources”. (Vermont Department of Forests, Parks and Recreation USA, in MacFarlane, 1994, p. 10).

“the process of stimulating and encouraging an appreciation of our natural and cultural heritage and of communicating nature conservation ideals and practices”. (Queensland National Parks and Wildlife Service, in Davie, 1993, p. 76).

“a kind of educational enterprise where the concern is that which is interesting to the visitor, or that which can be made interesting to the visitor, not that which someone else thinks the visitor ought to know, regardless of how interesting it is”. (Makruski, 1978, in Knudson et al, 1995).

These definitions share a common objective, that is providing interpretation to visitors - enhancing their understanding of the features of a destination. More importantly, interpretation can help the hard visitor management approach by enhancing visitors'

understanding of the reasons of applying regulations. As researchers indicate, visitors' lack of knowledge of a regulation can lead to their unskilled or uninformed behaviour (Ceballos-Lascuráin, 1996; Hendee et al, 1978; Moscardo et al, 1998). For instance, explaining the danger and outcome of lighting campfire in the woods to visitors in interpretive information is more effective than merely applying a regulation on the use of fire, as visitors are informed and therefore they are less likely to undertake such unskilled or uninformed activity.

However, there is debate over the effectiveness of interpretation in a recreational setting. For example, Forestell (1990) sees education as a potential "win-win" situation for both resources and visitors. Wheeler (1994, p.3), however, comments that "education is seen by many as the way forward for nurturing a "better" tourism. Dream on". This might be because the immediate benefits of interpretation are difficult to measure, and the changes in the visitors' behaviour may not result from the interpretive information but from other factors such as an awareness of social norms and their fear of being punished, such as fines, if they do not comply with the applied regulations.

Although there is a distinct lack of empirical research into the relationship between interpretation and behavioural change, the difficulties in demonstrating the change in behaviour as the outcome of participating in interpretation should not lead to little use of interpretation. Visitors' knowledge of resources of a site is likely to accumulate progressively from receiving interpretive information. On the other hand, if visitors already understand the value of the resources, interpretive information will reinforce the existing knowledge and in turn, may encourage them to modify their behaviour to be even more appropriate (Knudson et al, 1995).

Visitors come to the site in order to have a closer contact with the resources, the provision of interpretation cannot replace this actual experience (Schänzel and McIntosh, 2000). However, if there is a danger of over use of the scarce resources, it can lead to the permanent loss of the resources. Thus, in many tourism destinations

visitor use is managed and controlled. The dilemma site managers are facing is one of how to provide visitors with enjoyment and at the same time to prevent resource degradation from inappropriate visitor behaviour and activity. Recent research has shown that interpretation programmes can help to enrich visitor experiences and their knowledge of the features of the site, as well as their awareness of what inappropriate activity they should try to avoid.

Interpretation also helps deliver the site management objectives and the role of site-managing organisation to visitors, which can increase public support and understanding of the importance of conservation work and the application of rules and regulations in the site (Rennie, 1980, in Knudson et al, 1995). Moreover, visitor behaviour may be influenced through an enhanced experience, understanding and appreciation of a site (Cooper et al, 1998; Moscardo et al, 1998; Moscardo, 1999). Therefore, the eventual outcome of this education-oriented soft visitor management method aims to reduce the occurrence of inappropriate visitor behaviour by encouraging voluntary behaviour change (Hall & McArthur, 1993; Moscardo, 1999; Orams, 1996b, Tilden, 1977). More importantly, interpretive information of the features of a tourism destination can be presented via various media to replace visitors' actual interactions with the resources where the resources are too sensitive to sustain even limited tourism activities. Such interpretive programmes include live interpretation and audio-visual shows of historical events and geographical formation of a site.

Referring to the methods of the hard visitor management approach, permanent closure or restriction of access sometimes is applied to safeguard the resources as well as visitors' safety. In such instances, the use of media such as slide shows, exhibitions, video programmes and I-max cinema to present the feature to visitors is ideal in terms of providing visitors with the opportunities to experience the resources. They can present the sensitive features of a destination to visitors without disturbing the fragile resources. Moreover, activities such as guided walks, talks and self-guided trails, interpretation form a main part of the experiences. It provides visitors with the

opportunity to know what they are seeing. Sufficient interpretation can help to satisfy visitors' curiosity of the site. For example, well-designed exhibitions and landscape models provide an overall of the destination; and audio-visual programmes can offer an insight into the destination that visitors may not be able to experience because of their lack of knowledge or limited length of stay at the site.

Interpretive programmes and activities can benefit visitors significantly when the information presented is of a high standard. One example is the I-Max film of the Grand Canyon in the Grand Canyon National Park. The film presents the power of nature, in this case, the River Colorado, and the almost magical formation of the landscape of the Canyon. In fact, it is unlikely that an individual would be able to get such a magnificent overview of the Canyon even when flying over the site in a helicopter. The audio and visual impacts of the I-Max film gives viewers an impressive sensation of the site, and contents are full of valuable information about the landscape. Moreover, in the Greater Barrier Reef Marine Park, qualified divers leading scuba-diving activities, which not only ensure visitors' safety, their experienced eyes also help visitors to explore the reef ecosystem that unfamiliar visitors can easily miss out. In numerous palaces, stately homes and museums in Europe and North America, guided talks of the monuments offer visitors opportunities to know more of the human history. To sum up, interpretive activities can be enjoyable educational opportunity. Knudson et al (1995, p. 11) point out that "interpreters seek to fill recreational experiences with that extra element of heightened appreciation, deeper understanding, new ways of seeing the world". In fact, this statement can be adapted to replace "interpreter" with all forms of interpretive information and activities.

In Wood and Moscardo's (1996) research into the Skyrail Rainforest Cableway, in the Wet Tropics World Heritage Rainforest, North Eastern Australia, the authors surveyed the contribution of the on-site interpretation programmes to visitor experiences and visitor satisfaction levels. The Skyrail management scheme provides interpretation activities consisting of rainforest boardwalks with information signs, a rainforest information centre, and trained guides to provide tours and on-the-spot

explanation. The results showed that for visitors who participated in any of the three interpretation activities, their satisfaction levels, value for money and perception of information on the rainforest were significantly higher than visitors who just rode on the cableway. In addition, the majority of visitors were happy to revisit the Skyrail if they had the chance. The research also studied the effectiveness of the Skyrail interpretation activities in increasing visitors' knowledge of the rainforest. The results were positive in that visitors who had experienced any of the three interpretation programmes had learned more about the rainforest.

Another interesting finding of this research was that the Skyrail interpretation programmes might lead to a change in the visitors' intentions to engage in rainforest activities. The research of post-Skyrail visit survey indicates that visitors showed considerably reduced intentions to undertake some rainforest activities such as short rainforest walks, wildlife viewing and rainforest day trips. The heavily used sites are usually used to provide short rainforest walks and are often used by day trip operations. Therefore the conclusion can be drawn that there might be possibility of the change in behaviour induced by the Skyrail interpretation programmes. Furthermore, the more appropriate visitor behaviour may help to lower the pressure on highly visited sites.

Interpretation can be carried out in two distinct ways: demonstration and participation. Demonstration is communicating "to" a visitor, for instance, an interpreter or a curator at a museum and through audio-visual programmes the features or objects of the destination are shown to visitors. Participation is communicating "with" a visitor. Activities such as guided walks, talks, and self-guided trails that visitors have the opportunity to interact with the personnel and/or the resources to gain the first-hand experiences. Researchers suggest that participation is more effective method of interpretation because it enables visitors to feedback to the interpreter/ranger (McArthur and Hall, 1996c). Furthermore, interpretive information relies on personal (for instance, rangers, interpreters and museum curators) as well as non-personal media (including printed materials, signage, audio-visual shows and computer) to

communicate to and with visitors. The figure below shows the process of interpretation (See Figure 2.6).

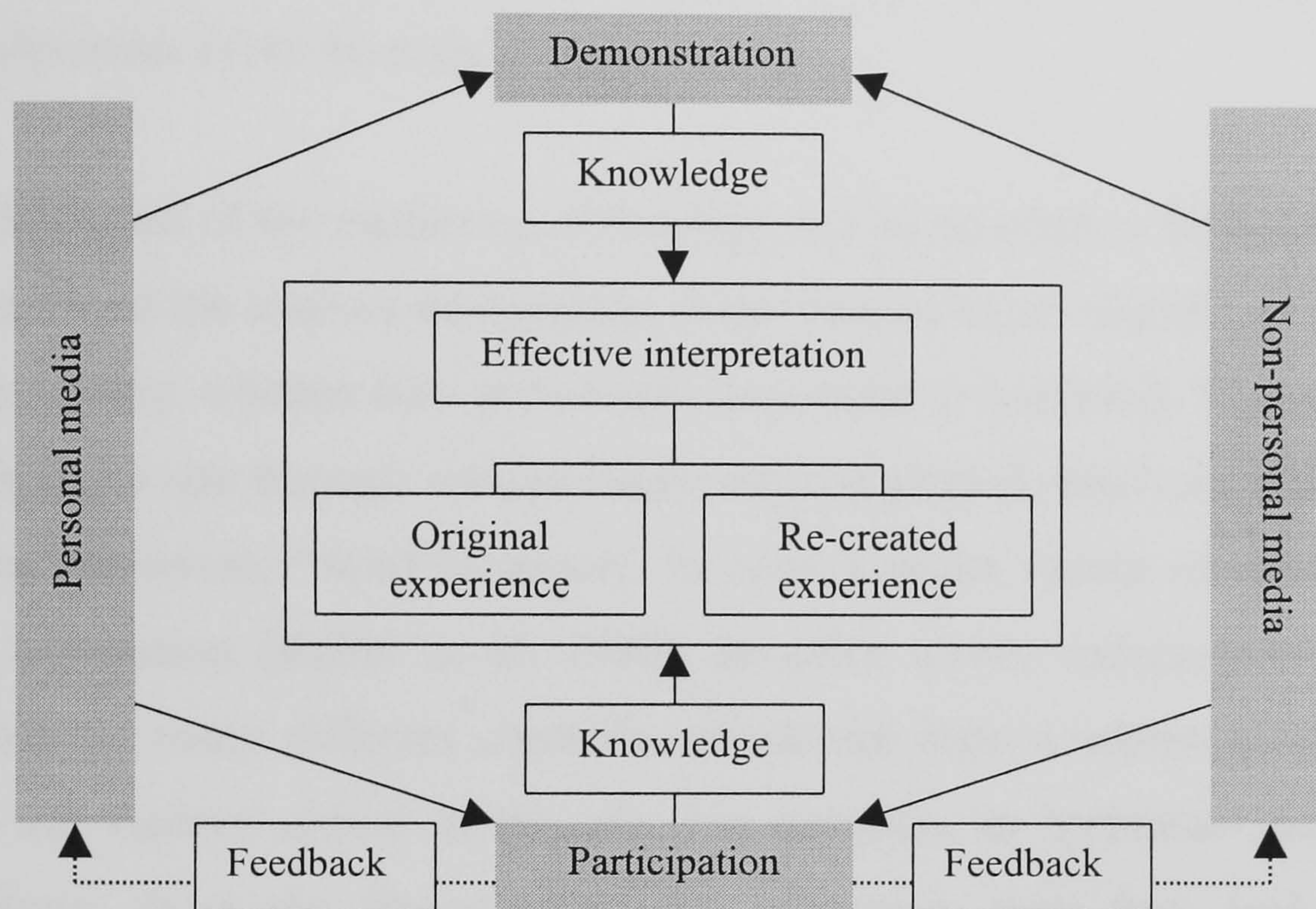


Figure 2. 6: The methods and process of interpretation.

Source: Adopted from McArthur and Hall (1996c).

2.3.2.4 Marketing, visitor research and monitoring

Visitor management aims to provide satisfactory visitor experiences, which requires an understanding of the visitor. In order to acquire knowledge about visitors, and to assess the effectiveness of management actions, marketing, visitor research and monitoring are necessary.

Marketing for tourism destinations is much more than just selling. It aims to provide visitors with satisfied experiences, which is focused on an understanding of their needs, wants and expectations, and matching them with the products the site-managing organisations offer (Hall and McArthur, 1996c; Roberts and Hall, 2001). Hall and McArthur (1996c, p. 74) adopt Kotler and Levy's (1969) definition of marketing and modify it in heritage management terms:

“Marketing is that function of heritage management that can keep in touch with the site’s visitors (consumers), read their needs and motivations, develop products that meet those needs, and build a communication program which expresses the purpose and management objectives of the heritage”.

Such a definition of the marketing of heritage can be adopted to broaden its scope to include most of the tourism destinations where resources are significant and valuable to human history, whether they are natural, man-made or historical. Visitors have prior knowledge of a site through various media such as printed materials, the Internet and television. Moreover, “word of mouth” is often a prime source of information of a tourism destination (Kotler et al, 1996). In other words, information of a site is distributed via many different channels, which can form a communication network prior to the visitors' arrival at the site. For instance, an individual has watched a documentary about the Pyramids on the television, then they look for related information from the Internet and/or books, newspapers or magazines. They may ask their relatives or friends who have been to Egypt before what their experiences were like if they decide to visit Egypt. Therefore, there are opportunities to reach to and communicate with potential visitors before their decision making process.

These communication opportunities can be utilised to distribute information such as the features of the site and their importance and sensitivity, visitor codes, regulations, the management objectives and actions. In so doing, visitors are made aware of the destination prior to their arrival at the site. Once they arrive at the destination, their knowledge can be reinforced through the interpretive information, which also extends their understanding of the features of the site that have attracted them to visit.

Research into visitors, such as their demographic background, origins, mode of transportation, motivation for visiting a destination, expectations, length of stay, type of accommodation, activities and expenditure at the site can be carried out via various means, including traffic counters, surveys, registration or log book from the

accommodation sector, and interviews. The information acquired is essential in order to plan and manage tourism support facilities such as car parks, information centres and accommodations (Graham et al, 1988). Moreover, the understanding of visitor flows, seasonality, types of activities and visitors' patterns of activity participation can benefit resource management of the site.

Visitor research and monitoring should be carried out regularly. Information collected from research and monitoring visitors in turn provides a foundation for further planning, marketing and management of the site. In short, marketing, visitor research and monitoring are interrelated. Moreover, information collected from such methods helps the development and alteration of hard visitor management approach and in turn, benefits the management plan of the destination

2.3.2.5 The review of methods of soft visitor management approach

The focus of the soft visitor management approach is on providing information to visitors to raise their awareness of the values and sensitivity of the resources, and the reasons for imposing restrictions. In so doing, site-managing authorities hope to provide satisfactory visitor experience and effectively manage and protect the resources. Hence, one may conclude that the soft visitor management approach provides the background for the application of hard visitor management approach. The figure below shows the practice of soft and hard visitor management approach in the management of a tourism site (See Figure 2.7).

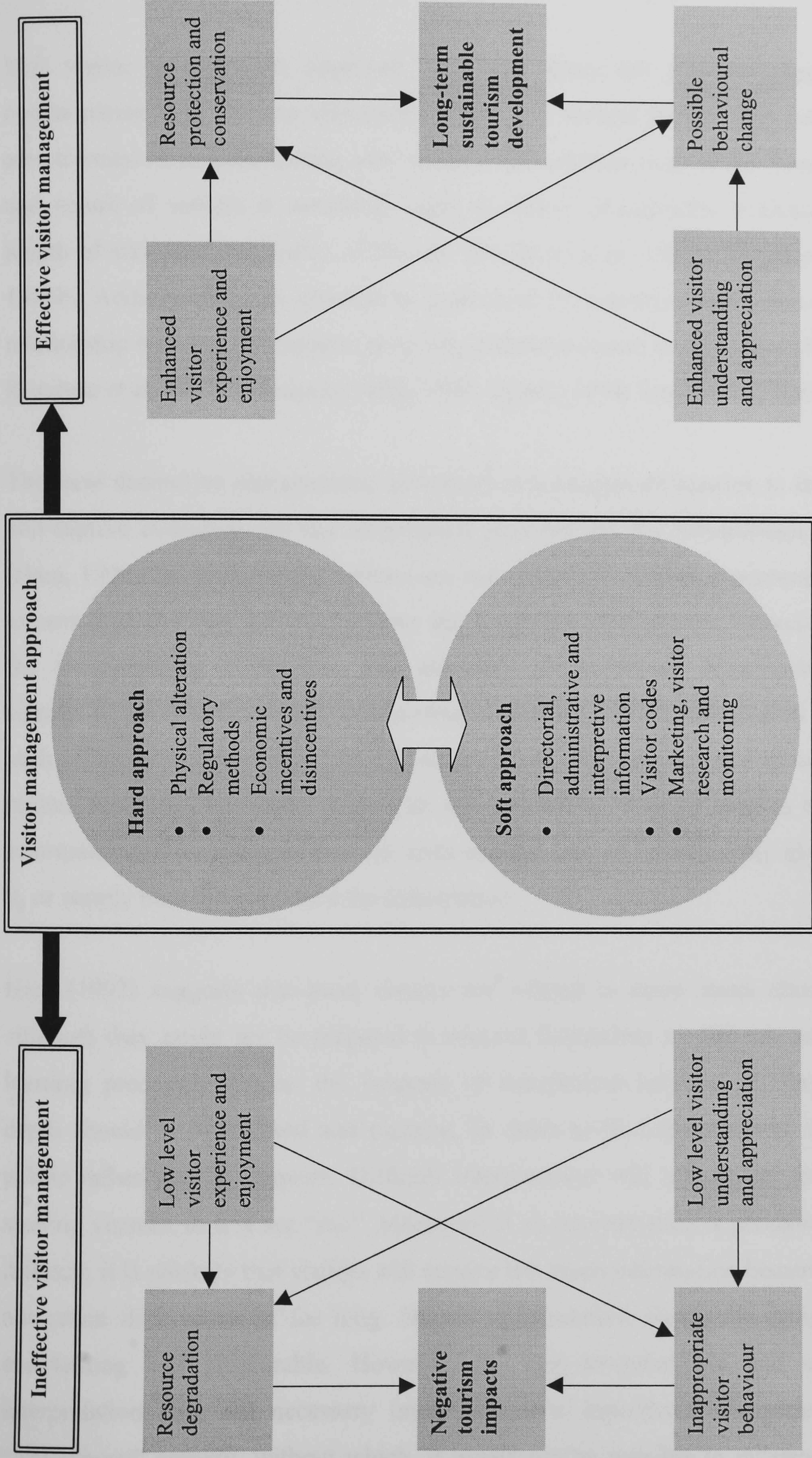


Figure 2. 7: The practice of visitor management approaches in effective tourism destination management.

Source: See Kuo (2002).

Soft visitor management approach functions when the site-managing agencies communicate with visitors effectively. There are several factors that influence the effectiveness of communicating with visitors. An understanding of the changing needs and nature of visitors is necessary, such as visitor demographic background, their length of stay, and familiarity of the site (Knudson et al, 1995; McArthur and Hall, 1996b). Additionally, it is essential to understand the communication process and the relationship between information receiving and behavioural modification (Ham, 1992; Knudson et al, 1995; Moscardo, 1996; 1999; Orams, 1994; Roberts and Hall, 2001).

The most distinctive characteristic of visitors in a tourism destination is that they are non-captive audiences for the information provided by the site-managing agencies (Ham, 1992). In other words, visitors are not obliged to receive a particular piece of information, and they are free to leave the communication process between them and the site-managing authorities. For instance, site-managing organisations placed signage to provide directorial, administrative and interpretive information to visitors, such information can also be found in audio-visual programmes, guided activities and printed materials. However, visitors do not necessarily want or need to receive this information for a variety of reasons, such as their lack of interest, they already know it, or simply they did not notice the information.

Ham (1992) suggests that most visitors are willing to know more about the site, although they might not be prepared to commit themselves to difficult and complex learning processes. Hence, the contents of interpretive information, language and depth should be considered and planned, in order to be understood by the general public rather than by experts. Difficult interpretation will not appeal to recreation seeking visitors, as it is not “fun”. Moreover, if an interpretation is perceived as being difficult, it is unlikely that visitors will receive too much information because they will not retain their attention for long. Hence, interpretation should be designed to be entertaining and pleasurable. However, the easy-to-understand and entertaining interpretation does not necessary imply that it is superficial. Interpretation is an “educational” activity, without which, it would not be possible to influence visitors’

behaviour. Site-managing authority should balance the entertaining element and knowledge content in order to present high quality interpretation. The table below provides the comparison between captive and non-captive audiences' characteristics that in turn, points out the likely setting of the communication of interpretive information between the site-managing agencies and visitors (See Table 2.7).

Table 2. 7: Typical characteristics of captive and non-captive audiences.

Captive Audiences	Non-captive Audiences
Involuntary audience	Voluntary audience
Time commitment is fixed	Have no time commitment
External rewards are important	External rewards are not important
Must pay attention	Do not have to pay attention
Will accept a formal and academic approach	Expect an informal atmosphere and a non-academic approach
Will make an effort to pay attention, even if bored	Will switch attention to something else if bored
Examples of motivation:	Examples of motivations:
<ul style="list-style-type: none"> • Grades • Diplomas • Certificates • Licenses • Jobs/employment • Money • Advancement • Success 	<ul style="list-style-type: none"> • Interest • Fun • Entertainment • Self-enrichment • Self-improvement • A better life • Passing time (nothing better to do)
Typical settings:	Typical settings:
<ul style="list-style-type: none"> • Classrooms • Job training courses • Professional seminars • Courses required for a license (e.g. driving) 	<ul style="list-style-type: none"> • Parks • Extension programmes • At home watching TV • Listening to radio, reading a magazine

Source: Ham, 1992.

The information in the Table 2.7 can be broadened to include how visitors receive not only interpretive information but also the visitor codes. Already visitor codes are the information that is site administration oriented, the undertone of regulations and restrictions within the visitor codes can frustrate visitors, particularly when the visitor codes are not designed appropriately. Hence, when planning visitor codes, the non-captive characteristics of visitors should also be taken into account. The codes should

not be too long, but are able to arouse visitors' interests to read on, and the regulation undertone should be subdued or visitors are unlikely to be motivated to pay much attention to it.

2.4 THE COMMUNICATION WITH VISITORS

The soft visitor management approach is a type of communication with visitors. Communication process involves message sender and receiver, as well as media to distribute the information. In the context of tourism, information sender is the site-managing authorities, and the receiver is the visitors. The theory of communication is discussed in Chapter Four, nonetheless, the media used in visitor management approaches are to be explored in this chapter.

2.4.1 Media

Sharpe (1982b) splits media into two types: personal or attended services and non-personal or unattended services. As its name suggests, personal media are the site personnel, whose roles in visitor management include informing visitors, policing and patrolling, leading guided activities such as guided talks and walks, responding to emergencies, staffing the tourist information centres, and performing interpretation, for instance, live interpretation. Non-personal media include signage, audio-visual devices, printed materials, self-guided trails, and exhibitions. The non-personal media are common features of many tourism destinations that one can see visitors looking for signs, purchasing site maps and local guide books, and browsing around museums or information centres in many tourism destinations.

Personal and non-personal media operate jointly to distribute methods of hard and soft visitor management approaches. Although some researchers suggest that personal media are ideal in delivering interpretive information (Sharpe, 1982b), in fact, this may not necessarily be the case. Referring to Table 2.7, visitors come to the site to carry out recreational activities and they might not want to commit their limited time

at the site to an interpretive activity. Moreover, directorial and administrative information often relies on non-personal media to be delivered to visitors. In short, the consideration of effective visitor management should be placed upon using a combination of both personal and non-personal media to distribute the methods of visitor management.

The research carried out by Olson et al (1984) point out that visitors' knowledge of management actions and the applied regulations at natural areas and reserves in Ohio increased significantly when they receive such information from a combination of media such as brochures and personnel, but signage does not produce the similar increase in visitors' knowledge. A more recent research conducted by Hughes and Morrison-Saunders (2002) relating to the changes in visitors' knowledge before and after the provision of interpretive signs along the trail also suggests that visitors' knowledge about the resources is not increased significantly after the implementation of trail-side interpretive signage, although repeat visitors showed significant increase in their knowledge about the features of the site. Nevertheless, visitors welcome the trail-side interpretive signs and expressed positive perception of a learning experience during their visits. In the research carried out by Hughes and Morrison-Saunders in the Tree Top Walk in Walpole-Nornalup National Park in Australia (2002), the original design of information provision was centralised approach (Stewart et al, 2001), that information was displayed on signs at the central visitor kiosk and along the access jetty at the beginning of the trail the but no further signs along the trail. Their research findings suggest that visitors felt trail-side signs provide prompt information along the trail and therefore they do not need to recall the information they read about at the beginning of the walk. However, Cole et al (1997) found that visitors' knowledge increased significantly following exposure to trail-side signs. In other words, there is no single medium outweighs another in the effectiveness of delivering information. Moreover, visitors are likely to use a combination of media to acquire information from according to their preference, the convenience and the availability of a particular type of media in situ.

In the context of delivering interpretive information to visitors through site personnel/guides/interpreters, two-way communication is especially important to successful interpretation activities (Crang, 1996; Faggetter, 1996; Moscardo, 1999, 2000). A guide may overestimates visitors' background knowledge. In such instance, visitors are less likely to understand the interpretation (Borun, 1991; Tilden, 1977). Also, visitors and guide may have different or conflicting understandings or beliefs, in turn, visitors might extract the interpretive information that makes sense to them (Miles, 1989). Hence, two-way communication with visitors is more ideal as it allows both visitors and site personnel to interact with and respond to each other.

2.4.2 Mindful versus Mindless visitors

Mindful mental state is said to be a necessary requirement for learning new information (Moscardo, 1999). A mindful individual pays attention to their surroundings and responds to the received information based on their active thinking. Mindful visitors are more likely to enjoy their visits to a site, learn more about the destination, and be interested in exploring and discovering the destination. They should also be more aware of the consequences of their inappropriate behaviour, and in turn, they might be more likely to modify it after receiving administrative and interpretive information (Moscardo, 1996, 1999; Prentice et al, 1998; Stewart et al, 1998). On the other hand, mindless visitors pay little attention to their surrounding, and they are less likely to receive and process new information cognitively. If a visitor goes to a site regularly and becomes very familiar with the setting, they are more likely to be mindless visitors - they tend to switch to “auto-pilot” mode in the site and are less likely to notice changes. Such “auto-pilot” styles of visiting a tourism destination points out the possibility that even law-enforced regulations are missed out because of visitors' mindless mental state.

More detailed discussion of mindfulness and mindlessness is explored in Chapter Three. The table below provides a comparison between mindfulness and mindlessness (See Table 2.8).

Table 2. 8: The comparison between mindfulness and mindlessness.

	Mindfulness	Mindlessness
Key characteristics	Open to learning Pay attention to the setting Development of new routines	Use of existing routine Little attention to the setting No learning
Situations	New and different settings Varied and changing situations Sense of control and choice Personal relevance	Familiar settings Repetitive situations Sense of little control, few choices No personal relevance
Outcomes	Learning and recall Ability to deal with problems Feeling of achievement Feeling of satisfaction	No learning, poor recall Limited ability to deal with problems Feeling of incompetence Feeling of dissatisfaction

Source: Moscardo, 1999.

Wanting to stimulate visitors' mindful mental state, Moscardo (1999) suggests two factors should be taken into account: communication and visitor factors. Communication factors include the contents of information, channel and the media; visitor factors refer to the things they bring with them to the site, such as their demographic background and expectations. The benefits of carrying out regular visitor research and monitoring are demonstrated fully in exploring visitor factors and their perceptions of the effectiveness of the communication between the site-managing agencies and the visitors. Through active and regularly updated communication with visitors, for instance, organising different guided activities and changing exhibitions in the museum in accordance to season or special event, even repeat visitors can be stimulated to be more mindful. In turn, not only would they have more enjoyable experiences, also, they are more likely to be receptive to the information provided by the site-managing organisations. Consequently, they would understand more of the features of the site, also observe the imposed regulations and guidelines for their activities.

SUMMARY

From the discussion in this chapter, it is obvious that visitor management should be integrated into the tourism planning from the initial stage, since it is designated and implemented to deal with visitors. Researchers split visitor management into two different approaches - hard and soft visitor management. Although these two approaches differ significantly in terms of their methods and nature, they should be applied in a co-ordinated manner in order to achieve the objectives of visitor management. Moreover, it is clear that effective communication with visitors is essential in order to raise visitors' understanding of the values of the site, as well as their awareness of the applied hard visitor management methods so they would be less likely to undertake uninformed or unskilled actions and activities. Researchers also suggest that making visitors mindful will help to increase visitors' enjoyment, knowledge and appreciation of the destination, and point out that communication and visitor factors should be taken into account in order to motivate visitors' mindful mental state. The viewpoint of stimulation of visitors' mindful mental state suggests that an understanding of how people respond to information and produce intentions to engage in a particular behaviour is necessary.

In the following chapters, elements that influence the production of visitors' intentions to conduct particular behaviour and effective communication are explored to analyse the underlying grounds of the various methods applied in visitor management in tourism destinations.

CHAPTER THREE

THEORIES OF LEARNING AND BEHAVIOURAL CHANGE

INTRODUCTION

Various visitor management methods, including environmental interpretation and visitor codes can be seen as a special type of educational programme particularly designed for and presented to visitors. The intention of such programmes being to enhance visitors' understanding of the resources while hoping that their improved knowledge of the site will result in the desired behavioural changes in order to help resource management and protection of destinations. Hence, it is not just the literature of tourism management that is important, an analysis of the principles and practices of education and people's behavioural modification is also important if visitor management is to be effective (Orams, 1994, 1996; Pierssené, 1999). In spite of the long history of research into educational psychology, few studies explicitly apply the theories of learning and behavioural modification to the study of visitor management. Therefore, the intention of this chapter is to examine the relevant learning theories that are applied to various visitor management practices. The psychological theories of learning and education are extensive and many are neither applicable nor relevant within the context of tourism and visitor management. The theories discussed in this chapter are those deemed to be relevant to the subject matter of this thesis.

It is worth noting that from the viewpoint of pure educational psychology, that education is seen as an activity that implies a formal, intentional, systematic transmission of knowledge and skills. Furthermore, many of the educational psychology theories are developed from experiments and tests on animals or children of an early age. Also, the applications of these theories usually focus on the settings of classroom education. Thus, it should be noted that the applications of these theories to visitor management in tourism settings differ from the traditional ones. Nevertheless,

being similar to the formal education activities, the soft strategies of visitor management, including environmental interpretation and visitor codes, require an understanding of the relationships between learners (visitors) and teachers (site-managing agencies). Soft visitor management strategies are education-based management strategies, and they are unlikely to be conducted successfully without a thorough understanding of what is going on in learners, between learners and teachers, and the concepts and applications of theories of educational psychology (Vander Zanden, 1980). Hence, the studies of formal education, of which, the emphasis on the relationship between the learner and the teacher, and their interactions, provides a background to the research and evaluation of the effectiveness of visitor management strategies in tourism destinations.

3.1 EDUCATION ACTIVITY

The fundamental intention of education is to shape human behaviour. Societies develop educational systems in order to promote the desired forms of behaviour to citizens (Hungerford and Volk, 1990). Educational activity consists of two parts: learning and teaching. Learning is a process that enables us to adapt our behaviour to fit in with our environment by learning from previous experience (Vander Zanden, 1980). It does not necessarily take place in a formally organised setting only, such as in a classroom or in a seminar, but also happens during casual interactions between people at anytime, anywhere. From the interactions with others, learning occurs as an individual gains the knowledge that helps them to modify their behaviour (Vander Zanden, 1980). In other words, learning results in behavioural change or occurrence, and there may be an accumulation of knowledge and experience prior to the change in behaviour taking place.

3.1.1 Definitions of Learning

Kimble (1961, in Hergenhahn, 1982, p. 3) defines learning “*as a relatively permanent change in behavioral potentiality that occurs as a result of reinforced practice*”.

This definition specifies that the success of learning is dependent upon changes in behaviour. That is, the results of learning must be translated into observable behaviour. Furthermore, the change in behaviour is relatively permanent, although not always fixed. In addition, the definition does not suggest that the behavioural change is an immediate response to learning experience. That is, learning will result in a potential for new behaviour to occur, nevertheless, the occurrence may not be an immediate action after learning. Also, experience plays an important part in the change, or potential change, in behaviour. Finally, the behavioural change must be reinforced. That is, there must be a form of reinforcement or reward following the behavioural change to strengthen the occurrence of new behaviour. From this the individual can say that they have learned the new behaviour. Reinforcement, in the study of educational psychology, refers to something that an individual wants. Very often the terms reinforcement and reward are used interchangeably in educational psychology literature (Hergenhahn, 1982).

In a tourism context, Kimble's (1961, in Hergenhahn, 1982) definition can only be partly applied to visitor management. From the viewpoint of a tourism destination manager, visitors' positive contribution to resource protection is the major criterion of successful visitor management. Whether the behavioural change is long term and applied to other tourism destinations is not the manager's main concern. Moreover, visitors' behavioural change, to be more appropriate at the destination, should be overt and in-situ, rather than just potential, or the visitor management strategies cannot be considered effective. Although visitors' knowledge of the destination may be increased as an outcome of the provision of interpretation, if the increased knowledge does not lead to the occurrence of desired behaviour, one cannot conclude that the visitor management strategies have been fully effective. With respect to the reinforcement of behavioural changes in the context of tourism and visitor management, visitors' behavioural modifications in tourism destinations are unlikely to be rewarded by an actual "prize" but by their feelings of satisfaction or achievement of "doing something good and appropriate and being responsible to the resources at the destination".

Such rewards as satisfying feelings and improved knowledge are in fact similar to the rewards one can receive in a formal learning environment. In the case of tourism, the improved understanding of the site and the resources is comparable to the intellectual development of students in a classroom setting. The type of rewards that visitors may receive after their participation in environmental interpretation focuses on their inner or mental development. Visitors “feel good” about their enhanced understanding and modified behaviour, because they consider their new behaviour would be more acceptable or appreciated by the society. Also, they might feel emotionally satisfied, as their appropriate behaviour would play an important role in sustaining tourism development in a destination where resources are fragile.

From the viewpoint of tourism destination managers, not only positive but also negative reinforcement can be applied. For inappropriate and illegal behaviour such as disturbance to wildlife, littering and disrespect the local society, there are methods to be used to counter and manage visitors. For example, in many tourism sites, information is often provided to ensure that visitors know the “DOs” and “DON’Ts”. When visitors engage in inappropriate behaviour, site-managing personnel may warn them and punishments may follow if they continue with the inappropriate conduct. Typical punishments include the implementation of fines on illegal and inappropriate behaviour and visitors may even be banned from entering sites, or asked to leave the site if they breach the law.

Although Kimble’s (1961, in Hergenhahn, 1982) definition provides a convenient structure for discussing and attempting to define what learning is, there are a number of issues worth further consideration. Firstly, there is a debate as to what exactly learning is. Most psychologists consider that observable or measurable behavioural change is an indication of whether learning has taken place. The behaviour itself is not learning but the outcome of learning. Because the learning process cannot be observed directly, it can only be inferred from the changes in behaviour (Hergenhahn, 1982). However, Skinner argues that behavioural change is learning and there is no need for further inference (Hergenhahn, 1982). Secondly, behavioural change and modification

may result from various factors, such as fatigue, illness, and even the use of drugs, not only from learning. While the effects of these factors on behaviour may be short lived, how permanent should a change in behaviour be in order to demonstrate that learning has occurred remains unclear. Moreover, the condition of “relatively permanent” as successful learning is not clearly defined. It is possible that an individual changes their behaviour in response to a particular factor; nevertheless, this change in behaviour may be just for the short term. For instance, the impacts of sensitisation and habituation upon learning are examples of short-lived behavioural change resulting from learning.

Sensitisation is the process whereby an organism is made more responsive to certain aspects of its environment. This organism may be exposed to a shock, such as sudden light or sound, which leads it to respond to the shock in a way that it would not do so normally. Therefore the shock sensitised the organism and the organism becomes more sensitive to responding to its environment. For instance, after an unexpected experience, say, very loud thunder after lightning, may make an individual more sensitive to the following lightning. Moreover, it is fairly common to feel sensitive following an upsetting experience, which is a form of sensitisation. For example, an individual who has just experienced the death of a close family member may be more responsive to a movie scene about a similar situation.

Habituation, on the other hand, is the process whereby an organism becomes less responsive to its surroundings. For instance, a person who is asleep may be woken up by a sudden noise or light, but may start to ignore it if the noise or light is continuous and therefore fall asleep again. Here, the process of losing the stimulation is termed habituation (Hergenhahn, 1982). Both sensitisation and habituation are short-term effects on behaviour modification. However, this does not necessarily indicate that an individual has not learned something.

In the context of tourism and visitor management, researchers have long argued that for visitor management strategies to be effective, visitors should be provided with

information that is relative to ourselves in order to stimulate their interests in and enthusiasm for modifying their inappropriate behaviour. Researchers suggest that informing visitors about the changes in the environment caused by human activity, including tourism and recreation, and what can be done to help conservation work is an effective way of increasing their knowledge of the site and interests in adopting a more resource-friendly behaviour (Ham, 1992; Pierssené, 1999; Tilden, 1977). In Manuel Antonio National Park, Costa Rica, a giant-sized single word “CONTAMINACION”, and a *spider web sculpture* with litter found hanging off it and a sign attached saying “Don’t dirty my home – The Spider”, are erected to highlight the litter problem in the Park. Combined with other management regulations, the sculpture and sign have proved effective in making visitors more aware of the litter problem and the conservation work in the Park. The park managing authorities also charge visitors refundable deposits on the items they bring in to the park to ensure that visitors take these items out when they leave the site, or they will lose the deposits. The litter problem is gradually minimised, and visitors are more concerned about their inappropriate behaviour of littering (León, in Ham, 1992).

In the above example, the surprising *spider web sculpture* and the giant sign of “CONTAMINACION” demonstrate the sensitisation process, where visitors are informed of the litter problems in the Park. Moreover, the refundable charges and other regulations reinforce the occurrence of desired behaviour by the park-managing authorities. Even though the behavioural change may not be completely voluntarily and might be short lived, from the park managers’ point of view, the sculpture and the sign serve the purpose of resource protection and management.

On the other hand, if visitors encounter a destination where resources and facilities are neglected, such as litter and damaged signs, poor or no information provided to visitors, it is possible that visitors would be less responsive to the values of the resources of the site. The little maintained facilities and tourism resources suggest that they are not worth management and protection. In turn, visitors are less likely to recognise the values of the resources at the destination, let alone to appreciate them. In

this situation, the effect of habituation has taken its toll. In other words, site-managing organisations should manage and maintain the facilities and resources, and provide appropriate information wherever possible to stimulate the visitors' understanding of the values of the site. In so doing, visitors' inappropriate behaviour is more likely to be minimised, and from which, the management of the destination benefits.

The observable behavioural modification may not happen immediately after learning has occurred. For example, students are taught how to solve a mathematics question, but the teacher may not know if they understand this particular mathematics knowledge until they are tested. According to educational psychology, since these students have the potential to solve the mathematics question, therefore, they have learned the necessary skills, although this may not be observed. In the case of visitor management in a tourism destination, for example, a botanical garden, it is difficult to carry out on site observation or measurement of what visitors have learned from the information provided to them. A possible technique may be to survey visitors' perceptions and suggestions of the information they received, and their intentions to modify their behaviour accordingly after their receiving of such information.

However, the "potentially" different behaviour does not contribute much to the management of resources. In sensitive tourism destinations, site-managing authorities would much prefer visitors to modify their inappropriate activities soon after their learning has taken place to avoid any unnecessary damage to resources. The management strategy in response to this hoped-for behavioural modification is to provide information to visitors prior to, or immediately after, their arrival. Additionally, hard visitor management strategies such as the application of regulations and law-enforced rules are used to ensure that inappropriate behaviour does not occur in the first instance.

According to Kimble's (1961, in Hergenhahn, 1982) definition of learning, the reinforced practice is necessary for learning to occur. However, there is a general disagreement among learning theorists about this viewpoint, not only about what

consists of reinforcement or reward, but also whether it is a necessary requirement for learning to take place (Thorndike and Skinner, both in Hergenhahn, 1982). Nonetheless, the fact that the effects of appropriate rewards are usually positive cannot be denied. That is, behavioural modification resulting from learning can be strengthened by proper reward.

In response to the above debate on Kimble's (1961, in Hergenhahn, 1982) original definition of learning, Hergenhahn (1982, p. 8) proposed a revised version: *learning is a relatively permanent change in behavior or in behavioral potentiality that results from experience and cannot be attributed to temporary body states such as those induced by illness, fatigue, or drugs*. This modified definition of learning attempts to be neutral on the issue of reinforcement to make it more widely acceptable. Yet, this definition still emphasises that learning will lead to potential and/or actual behavioural changes, and these changes should be relatively stable and long term.

However, in the case of visitor management, visitors' learning needs to be observable behavioural modification to be more appropriate, and the use of punishment to reinforce that undesirable behaviour does not occur is a common practice in many tourism destinations. Whether the changes in visitors' behaviour are for long-term really is not the site-managing personnel's main concern. Instead, the effectiveness of the visitor management strategies in a tourism site is assessed based on whether visitors modify their behaviour to be more appropriate in situ.

3.2 THEORIES OF LEARNING

Theories of learning can be divided into three broad categories: conditioning theories, observational (imitation) theories, and cognitive theories. In a classroom environment, understanding these various concepts of learning can help to improve teaching skills, as they indicate influences that teachers/educators place upon students to facilitate learning (Vander Zanden, 1980). Theories discussed in the following section were considered being applicable or relevant to visitor management strategies in the context

of tourism and recreation context. Various examples of the use of these theories in visitor management in tourism destinations are discussed to highlight the connections between the learning theories and visitor management approaches.

3.2.1 Conditioning Theories

In the twentieth century, the concept of behaviourism dominates much of the educational practice. Behaviourism focuses on human activities, in other words, the emphasis of behaviourism is on how people behave. In general, behaviour is termed responses, and the causes of a response are named stimuli. There are two streams of conditioning learning theories: classical or respondent conditioning, and operant or instrumental conditioning (Vander Zanden, 1980).

3.2.1.1 Classical conditioning

The development of classical conditioning theory is based on the work of Ivan Pavlov (1927). During his research into the production of stomach secretions as a dog's response to food, he discovers that the dog would salivate only when the food was fed to it initially. After a period of time, he notices that the mere sight of food would make the dog salivate. Then even the sight of the experimenter or the sound of his footsteps will cause it to produce saliva. Pavlov carries on his study by ringing a bell before he feeds the dog. After several tests, the dog salivates at the sound of the bell even if the food does not follow. In this experiment, the new connection between the sound of a bell, a stimulus, and salivation, a response, is developed (Hergenhahn, 1982; Vander Zanden, 1980).

Salivation is an involuntary and unlearned response that is automatically triggered by a specific stimulus. In the above experiment, the food in the dog's mouth is the stimulus. The results of Pavlov's study show the process of stimulus substitution, that is, a stimulus (the food) that naturally elicits the response (salivation) is substituted by a stimulus that was previously a neutral stimulus (the sound of a bell). This is

described as classical conditioning. There are three major components in classical conditioning: (1) an unconditioned stimulus (UCS), which brings forth a natural and automatic response from the organism; (2) an unconditioned response (UCR), which is the natural and automatic response caused by the UCS; and, (3) a conditioned stimulus (CS), which is a neutral stimulus that does not elicit a natural and automatic response (Hergenhahn, 1982; Vander Zanden, 1980).

Classical conditioning is widely applied in educational psychology in classroom settings. For instance, a schoolboy who has developed stage fright feels uncomfortable, awkward, nervous or even scared when asked to give a presentation in front of his class. This situation is a result of being laughed at on previous occasions when reading before his class. The laughter from his classmates can be seen as an unconditioned stimulus, and the stage fright is the unconditioned response. The initially neutral activity (conditioned stimulus), the presentation, is associated with laughter, the UCS, and results in the schoolboy's stage fright. The boy's teacher can assist his learning process by engaging him in the situation gradually rather than avoiding it, whilst providing the boy with pleasant stimuli to minimise his stage fright, for example, appropriate encouragement and positive comments on how to improve his presentation skills (Vander Zanden, 1982).

Classical conditioning theory is also used in tourism destinations to protect resources and visitors. Visitors go to national parks, forests and mountains to experience wilderness and unspoiled nature. However, some sites which are geographically remote or where some species of the wildlife in the area are poisonous, the encounter with flora and fauna may be potentially dangerous to visitors. Some visitors may have had an unpleasant experience previously, for example, being stung by insects or plants, being shocked by unexpected encounters with wild animals, or being physically exhausted from participating in a particular activity. Some may have heard stories of these incidents from their family and friends. Thus, activity such as trekking in a national park may be associated with unpleasant incidents, and visitors may be nervous or panicky since they worry that they might face danger along the way. The

on-site management scheme can correspond to such a situation by providing visitors with the information including the difficulty level of the treks in the site, the wildlife they may come across, basic life saving techniques if in a crisis, as well as emergency contact numbers. Instead of prohibiting visitors from experiencing the wilderness, the information provided enables visitors to prepare themselves in advance, and minimises unnecessary casualties.

3.2.1.2 Operant conditioning

The difference between classical and operant conditioning is that classical conditioning depends on the prior existence of a response that can be mustered in the presence of a new stimulus. The lack of pre-existing unconditioned stimulus with which a new stimulus can be connected makes it difficult to demonstrate how human behaviour changes by classical conditioning theory. Operant conditioning is, on the other hand, a type of learning that whereby the consequences of behaviour will alter the strength of that behaviour. For example, when teaching a dog to do a trick, if it follows the instruction and does the trick correctly, it will be rewarded with food. Here, the food comes after the response, but in classical conditioning, the food appears prior to the response.

In operant conditioning, behaviour is susceptible to affect by changing the consequences. In other words, if an organism's behaviour results in receiving something it wants in return, that particular behaviour is more likely to recur (Skinner, 1953). In short, operant conditioning emphasises the consequences of behaviour, and the organism must respond in such a manner as to generate the reinforcing stimulus.

In a tourism context, the operant conditioning can be seen in destination management strategies. For example, in a community where economies rely on traditional agricultural or fishing, employment in the tourism industry is likely to provide a more stable, and maybe higher, income. There may be increasing younger locals getting jobs in the tourism and hospitality industry since better pay is one way to improve

their living standard. Following the increased wealth, they will experience rising social status and prestige among their acquaintances which, in turn, reinforces their decision to stay in the tourism and hospitality industry as well as to encourage other members of the society to seek job opportunities in tourism. Moreover, visitors who have had an enjoyable experience and enhanced understanding of the site through receiving information and their participation in interpretation programmes during their visits to other destinations may be more likely to take part in other interpretation in other tourism area in the future. On the other hand, if their experience of environmental interpretation falls short of their expectations, the chance that they would engage in it again may decrease since they did not receive the reward they expected. The above examples show how the consequences of particular behaviour can lead to the rate of the occurrence that particular behaviour in the future.

There are a number of processes involved in operant conditioning, including reinforcement, punishment, shaping, extinction, stimulus generalisation, and stimulus discrimination (Hergenhahn, 1982; Vander Zanden, 1980). These processes are in fact, interwoven with regulations and management strategies in many tourism destinations.

Reinforcement

Reinforcement plays a crucial role in operant conditioning. When applied it may result in an increased occurrence of a particular response. Skinner (1971, in Vander Zanden, 1980, p. 108) defines it as “when a bit of behavior is followed by a certain kind of consequence, it is more likely to occur again, and a consequence having this effect is called a reinforcer”. Many teachers as well as parents are aware that rewarding a child for behaviour is likely to strengthen the rate of the occurrence of that particular behaviour. Although some may argue that rewarding a child is bribing a child, psychological research proves that reinforcement is an effective approach in behavioural modification. There are two types of reinforcers, positive and negatives. A positive reinforcer is something rewarding. It strengthens the probability of a repetition of the behaviour when applied. On the other hand, the application of

negative reinforcer suggests that a stimulus is removed following behaviour in order to increase the recurrence of that particular behaviour. The negative reinforcer is something the organism does not want, thus, the removal of this stimulus strengthens the probable repetition of that behaviour.

Psychologists differentiate positive and negative reinforcers according to whether the presents or withdraws of these reinforcers will increase the recurrence of a behaviour. In other words, when an organism is given something it wants (positive reinforcer), or something it does not want (negative reinforcer) is taken away, the behaviour is encouraged. When a positive reinforcer is taken away from an organism, or a negative reinforcer is applied to it, the recurrence of a particular response may decrease. Such a technique used to reduce the frequency of a response is termed punishment.

Punishment

Whereas reinforcement is believed to be able to enhance the link between the stimulus and its response and may increase the frequency of it, punishment is used to weaken the link and reduce the repetition of that behaviour. Punishment engages in either applying negative reinforcers or taking away positive reinforcers. However, the effectiveness of applying punishment has long been doubted as it does not seem to decrease the recurrence of behaviour but suppresses it for as long as the punishment is applied. Thorndike (1932, in Hergenhahn, 1982) argues that punishing behaviour has no effect on the strength of the connection between the stimulus and the response. Thorndike's arguments on the effectiveness of punishment contrast what people had believed and practised for centuries.

Thorndike is not alone in having a new insight into the use of punishment. According to Skinner (1971, in Hergenhahn, 1982, p. 101), "Punishment is designed to remove awkward, dangerous, or otherwise unwanted behaviour from a repertoire on the assumption that a person who has been punished is less likely to behave in the same way again. Unfortunately, the matter is not that simple. Reward and punishment do

not differ merely in the direction of the changes they induce. A child who has been severely punished for sex play is not necessarily less inclined to continue; and a man who has been imprisoned for violent assault is not necessarily less inclined toward violence. Punished behaviour is likely to reappear after the punitive contingencies are withdrawn". Skinner's main debate on the efficiency of punishment is that it is unlikely to be effective in the long term. Punishment suppresses behaviour, however, when the threat of punishment is withdrawn, the frequency of the occurrence of that behaviour increases to its initial level. Therefore, the effects of punishment are only of temporary.

Although punishment may have limited effect, it is still applied widely. There are two ways to apply punishment: punishment by application, and punishment by removal. Punishment by application is to add an unwanted stimulus (negative reinforcer) to prevent repetition of behaviour, for example, applying fines on speeding. Punishment by removal is withdrawing a positive reinforcer, such as invalidating a driving licence. The Table below illustrates the relationships between positive and negative reinforcers, and the application of reward and punishment (See Table 3.1).

Table 3. 1: Relationships and results of positive/negative reinforcer application.

STIMULUS	APPLIED	TERMINATED
Positive Reinforcer	Positive reinforcement <ul style="list-style-type: none"> • Increasing in recurrence of behaviour 	Punishment by withdraw <ul style="list-style-type: none"> • Decreasing in recurrence of behaviour
Negative Reinforcer	Punishment by application <ul style="list-style-type: none"> • Decreasing in recurrence of behaviour 	Positive reinforcement <ul style="list-style-type: none"> • Increasing in recurrence of behaviour

Source: Vander Zanden, 1980.

Using Table 3.1 's format, Table 3.2 illustrates the common use of reward and punishment as management tool in tourism sites.

Table 3. 2: The use of reward and punishment in managing tourism destinations.

STIMULUS	WHEN APPLIED -	WHEN TERMINATED -
<p>Positive Reinforcer – For example, enjoyable visit experience.</p>	<p>i.e. Positive reinforcement</p> <ul style="list-style-type: none"> • Repeat visit to the site when experienced enjoyable and memorable time previously. • Recommending family and friends to visit the site. 	<p>i.e. Punishment by withdraw</p> <ul style="list-style-type: none"> • Unsatisfied experience resulting from insufficient management of resource and facility, and the lack of interpretation provision, may decrease visitors' willingness to revisit the site.
<p>Negative Reinforcer – For example, charging refundable deposit as a management tool to maintain the cleanness in a site.</p>	<p>i.e. Punishment by application</p> <ul style="list-style-type: none"> • Loss of deposit when failed to bring out the items that they took to the site. 	<p>i.e. Positive reinforcement</p> <ul style="list-style-type: none"> • The deposit is refunded to visitors who help to maintain the cleanness of the area by bringing out the items they took in to the site with them.

Shaping

It may take a very long time for an organism to change its behaviour. Shaping is an approach to quicken the process of behavioural modification. The desired behaviour is broken down into consecutive steps and taught gradually. When the organism successfully completes the first step, it will be reinforced by rewarding the occurrence prior to proceeding to the next step. Hence the new behaviour is learned progressively and each stage of the procedure is reinforced (Vander Zanden, 1980). Shaping can be employed in a school environment. Students should be rewarded in stages to ensure that the change in behaviour is wanted and the change should be for the long-term. Once the change is mostly stabilised, the teacher needs to move forward to a closer approximation of the final goal rather than still reinforcing the old response. This is to prevent students from staying in the old position of the behavioural modification procedure without further development.

Extinction

Extinction refers to a decrease in behaviour that results from its continuous failure to be reinforced. It occurs because behaviour no longer produces what the organism

wants: people stop doing something because the outcome is not satisfying. For example, a child may want to stop practising swimming because he constantly swallows pool water. In a classroom setting, if children are asked to raise their hand and wait before speaking, some children may give up raising their hand after a short while because they have not yet been called to speak. Thus, raising hand and waiting to speak fails to be rewarded, these children may just speak without raising their hand and waiting. On the other hand, children who have been called to speak, their behaviour of raising their hand and waiting is reinforced. The teacher can extinct the behaviour of not raising hand and waiting by ignoring those children since they will not receive the reward (the teacher's attention). However, one of the limits of applying extinction in a classroom environment is that it may not be effective immediately. It is not always possible to ignore badly behaving children. Furthermore, there is likely to be initial increase in the particular behaviour that the teacher wants to reduce, as children tend to experiment by testing to see to what extent the teacher will ignore their disruptive behaviour (Vander Zanden, 1980).

If extinction is applied in a tourism destination to manage its resources and facilities, the outcome is likely to be unfortunate. Clearly, there are not many sites that can afford to be managed by "failing to provide visitors with high standards of experience". The possible outcome would be damaged resources and facilities, low visitor profile and expenditure, declining tourism industry, and a loss of income in the local community. The behaviour extinction might be explained using tourism employment as an example. As discussed previously, working in the tourism industry provides stable income in where economy is traditional agricultural or fishing, therefore, more locals may be attracted to seek jobs in tourism and hospitality industry. Once the traditional economy in the local transformed into developed, industrial economy, the prestigious perception of "working for Western delegate" and better pay in tourism and hospitality industry no longer exists. The enthusiasm of looking for employment opportunity in tourism business will then extinct.

Stimulus generalisation and stimulus discrimination

Often we respond in the same way to one stimulus as we do to other similar stimuli. For example, a schoolboy learns to take biscuits from the cupboard when he feels hungry after school. Next time he is feeling hungry again after his afternoon nap, he realises that he can open the cupboard to have biscuits. This process is termed stimulus generalisation.

On the other hand, stimulus discrimination is an ability to separate relevant stimuli from irrelevant ones. Such ability enables us to respond or ignore stimuli in various surrounding environments accordingly. For instance, a speed limit sign of 30 mph in a town centre does not achieve its objective of slowing down people's driving speed, because most residents know that there is no speed camera in operation and unless they are caught by the police for speeding, which does not happen often, many will ignore the speed limit. Residents discriminate between stimuli. Since the speed limit of 30 mph in the town centre is unlikely to result in fines and records in their driving licences, in other words, these stimuli are not relevant to their responses in the town centre environment. In this case, it may be said that residents' behaviour of driving within the speed limit is extinct, because it fails to be reinforced (negative reinforcement, in this context).

However, residents may respond to speed limit signs differently in other environments. A visitor who first comes to a town may respond to the signs of a speed limit by slowing down immediately when they see the warning because in their familiar environment, speed limit signs are associated with cameras. This visitor generalises the stimuli and responds with the same behaviour that they would have acted in their usual surroundings. If the local council installs speed cameras in town, the majority of residents may respond by slowing down for fear of punishment. But, if the speed cameras are not in use, for example, no films are fitted, the suppressed behaviour of speeding may reappear after this is realised.

The theories of conditioning suggest that there is a clear and strong bond between an organism and their environment. However, the stimulus-response type of learning is not the only way of learning, and this learning method may not always be efficient. Stimulus-response learning is learning from direct experience: an organism learns from trial and error, that is, through being reinforced or punished, it modifies its behaviour. Nonetheless, conditioning theories cannot explain human learning activity fully. For instance, learning how to cross a street, if we have to learn from experience, many of us would have to be injured or killed before learning occurs. Conditioning theories also fail to demonstrate how people imitate each other's behaviour. In fact, we learn in three different ways: we learn from direct experience, from observing other people's behaviour, and we learn in a mental cognitive process.

3.2.2 Observational Learning Theories

Humans are social beings, and we often mutually influence each other's thoughts, feelings as well as behaviour. We also learn from observing and imitating others. From watching others, we learn a new response without first experiencing it ourselves. It is an essential factor in formal education, since school is a form of society and teaching is a social process. However, observational learning should not be confused with merely imitating others' behaviour.

According to Bandura (1977), observational learning is primarily a cognitive process which involves various qualities that are distinctively human, such as morality, thinking and the self-regulation of an individual's behaviour. Bandura (1977) also indicates that observational learning may or may not involve imitation. For instance, an individual is about to leave for work when they notice that others on the street are running and looking for shelter when a sudden rainstorm strikes. Based on their observation, they may take an umbrella with them to avoid getting wet. They do not imitate others who run in the rain for shelter, but learn from their observation that they should take an umbrella if they do not want to get wet. The individual processes the information received during their observation cognitively, and acts upon it in a

way that would be advantageous. Thus, observational learning is a much more complex process than imitation which is usually just mimicking another's behaviour. Moreover, Bandura (1977, p.38) believes that observational learning occurs constantly, "after the capacity for observational learning has fully developed, one cannot keep people from learning what they have seen".

Bandura's (1977) theory of observational learning indicates that a role model can be influential. From watching the model's behaviour and the consequences of that behaviour, the observers' behaviour is influenced indirectly. In his theory, a model can be anything which delivers information, not necessarily to be a real life form, or a real person. Hence, a film, a television programme, a character in a story, or a picture can act as a model. He suggests several types of effects a model has on observers: acquisition, inhibition, disinhibition, facilitation, and creativity.

Behaviour acquisition and behaviour inhibition

Behaviour acquisition refers to an individual learning new responses by watching a model being reinforced for particular behaviour (Vander Zanden, 1980). For example, a visitor learns to order exotic food and drinks after they see other visitors eating them and obviously enjoying them. In contrast, when a model is seen being punished for behaving in a certain manner, the observer may learn to avoid this particular action. This is termed behaviour inhibition (Vander Zanden, 1980). For example, in a classroom setting, a teacher punishes one child for inappropriate action, for instance, disturbing others in the class, in the presence of other children to discourage others from engaging in the same behaviour.

As mentioned above, the model can be any form of media to deliver information. In tourism destinations where certain activities and behaviour are not tolerated, such as gambling, prostitution, alcohol consumption, drug abusing, and holding hands and kissing the opposite sex in public, this information can be distributed to visitors prior to their arrival. Such information can be filmed or printed and delivered through tour

operators, tourism boards, and in-coming aircraft. Moreover, films of locals and visitors being punished or fined for unacceptable activity can also be used to inform potential visitors. From these various information sources, visitors are expected to inhibit their possible involvement in inappropriate behaviour while they are in the destination.

Behaviour disinhibition

Behaviour disinhibition, on the other hand, refers to the reduction in response inhibitions in the observer. It occurs when an observer sees a model involved in a possible fearsome situation but without suffering negative consequences, the observer's fear of that particular situation is reduced (Hergenhahn, 1982; Vander Zanden, 1980). For example, a child's fear of climbing a tree may be reduced after they see other children successfully climbing a tree without getting injured. Another example of behaviour disinhibition is when a schoolboy notices another boy gets away from punishment when he punches the girl sitting next to him; the first boy may be likely to imitate the behaviour. Or, a boy sees his father drop litter on the street; he may learn this behaviour quickly even though he learned at school that littering is not correct.

In the context of tourism and visitor management, there are suggestions that visitors on holiday have less constraints than they usually do at home. That is, they may intend to spend more money and engage in certain behaviour or activities that they would not get involved with while they are at their home environment (Mathieson and Wall, 1982). Therefore, behaviour such as heavy drinking, gambling, and inappropriate sexual activity that may be inhibited at home, may be disinhibited after they see fellow visitors participating in these activities. This is especially the case when certain behaviour is prohibited in the home country. For instance, in many Muslim countries, gambling, drinking and sexual activities with people other than an individual's husband or wife can be seen as criminal and punishable offences. It is fairly common to see people from the Muslim world, especially men, engaging in different behaviour

from what they normally do at home. It can be explained that certain behaviour is disinhibited in different environments after observing that the consequences of those actions are not punishment. Thus, a Muslim man may engage in certain activities when he observes the new environment wherein his social or traditional restrictions do not exist. However, even in a new environment, if there are other people from the same country as this Muslim, he may be likely to withdraw his disinhibited behaviour because it is possible that his fellow countrymen may not tolerate such behaviour.

Response facilitation

An observer's behaviour that has been learned previously but not engaged in before may be elicited by observing a model. The model's response to a particular situation increases the possibility of doing what the observer may not otherwise do. This is termed response facilitation, which differs from disinhibition. The latter occurs only when behaviour is inhibited (that is, the consequences of that behaviour are negative or punishment). On the other hand, facilitation indicates that particular behaviour that an individual is unlikely to adopt becomes more probable (Hergenhahn, 1982; Zimmerman and Ghozeil, 1974, in Vander Zanden, 1980). For instance, in developing countries where the management and protection for tourism resource is behind most of the developed world, some visitors from a developed country may be less concerned about nature protection than they would in their home country. In particular, when they see that others, local or foreign visitors, do not care about the environment, they might leave rubbish behind, purchase souvenirs made from endangered or protected wildlife and vegetation, or drive their vehicles at a high speed. This can be seen as response facilitation, because the possibility of responding in a certain manner increases after their observation at the destination.

Response creativity

An observer's creativity is developed from their contact with a variety of models that leads them to adopt combinations of behavioural characteristics or styles (Bandura, 1977). This is often seen in classroom settings and in families where children learn,

grow up and mix with other children, friends, siblings, and other family members. In a context of tourism, the development of tourism in a destination partially contributes to the mutual understanding of different cultures. It helps introduce different languages, life styles and values between the locals and visitors (de Kadt, 1979; Swarbrooke, 1999). Therefore, the interactions between the locals and visitors from various countries may enhance an individual's response creativity. However, the contacts between the locals and visitors can be shallow, temporary and incomplete in nature (Mathieson and Wall, 1982). Therefore, an individual's new response resulting from the combinations of behaviour characteristics may be biased.

Bandura's (1977) observational learning concepts demonstrate a clear distinction between learning and performing. He studies three groups of children watching a film in which an adult is modelling aggressiveness by hitting and kicking a doll. The first group sees the model's aggressiveness is being reinforced, the second group of children sees the model is punished for his aggressiveness. For the third group of children, they watch the film that the consequences of the model's aggressiveness is neither reinforced nor punished. Later, all children are exposed to the doll and their aggressiveness towards the doll is measured. The first group of children, as may have been expected by the researcher, is most aggressive, and for the children who have seen the model being punished, their aggressiveness is the least noticeable. The third group's aggressiveness is between the first and the second groups. This experiment indicates that the children's behaviour is influenced by indirect experiences. That is, the experiences they observed in the past have an impact on their own behaviour.

The first group of the children observed positive reinforcement upon the aggressive behaviour, and in turn, their aggressiveness is facilitated. Children in the second group saw punishment from being aggressive. Consequently their aggressiveness is inhibited. Although these children did not experience reinforcement or punishment directly, their behaviour is modified because of their observation of others. Furthermore, the relationship between learning and performance is illustrated in this study, as all the children have learned the model's aggressive behaviour from the

video footage, but their own aggressiveness towards the doll varies, depending upon whether the model is reinforced, punished, or neutral (Hergenhahn, 1982).

In education practise, observational learning is believed to be a more economical teaching-learning technique than conditioning learning. This is especially true when complex skills or novel responses are involved. For example, it is much easier for a child to learn kicking a football, playing a music instrument or solving a mathematics problem by observing the teacher or instructor's behaviour prior to practising these complex skills directly (Vander Zanden, 1980).

Moreover, Bandura's (1977) research also reflects real life situations and problem solving. His theory is often considered social learning theory, since Bandura very much emphasises the impact of people on other people. He stresses that the significant social reference groups, for instance, friends, authorities and families, their thoughts of what behaviour is appropriate to conduct can have affect on an individual's behaviour. In a social setting, whether an individual learns from either direct or indirect experience, it is common that others are involved. According to Bandura (1977), it is based on an individual's observation and interaction with others that their cognition is developed (Hergenhahn, 1982). The argument of social learning theory, in fact, can find examples in many situations, for example, in formal education environments such as a classroom, in an individual's everyday life, and in recreational setting .

In a classroom environment, a teacher can influence students by modelling a particular behaviour, say, selfishness or altruism, racial equality or racial prejudice (Bandura and Mischel, 1965, in Vander Zanden, 1980). Altruistic behaviour benefits others without expectation of external rewards. This behaviour is crucial in group life, especially in small and close groups such as an individual's immediate family and intimate friends. Research shows that a child's altruistic responses towards others are usually influenced by what the teacher does more than by what the teacher says (White, 1967, in Vander Zanden, 1980). Also, a father tells his boy not to drop litter on the street but he himself throws a cigarette end on the ground, this boy is unlikely to maintain the

appropriate behaviour of putting rubbish in a bin when he has a sweet wrapper in his hand next time.

The relationships between observational learning, demonstration effect and tourism

In the context of tourism, the demonstration effect refers to the situation that observation of foreign visitors influences the behaviour of local residents (Mathieson and Wall, 1982). Such demonstration effects can be beneficial when it encourages the locals to adapt to or to work for things that they lack. However, it has been suggested that the development of tourism, especially in the developing world, brings more unfavourable impacts than benefits (Butler, 1995; Mathieson and Wall, 1982; Swarbrooke, 1999). The younger generation may tend to accept and imitate Western ways of thinking and behaviour after meeting visitors from the developed world, subsequently, they might abandon their traditions. Without careful consideration and selection of what western behaviour can be learned, in some developing countries where communication with the outside world has always been limited, this demonstration effect is especially profound. Moreover, although tourism provides opportunities to improve the standards of living, for example, the development of an efficient infrastructure, improved hygienic sewerage disposal system, high technology communication and an electronic system in tourism resorts can be developed throughout local society. The other chain effect is that it would attract more labour into tourism sector, which may contribute to intra-regional and intra-national population migration, as well as an unbalanced distribution of labour in the country's economy.

The affluent western visitors may perceive locals as poor and less developed. They may then be happy and willing to "help the poor locals out" by giving them money and other materials. This can have two different consequences: firstly, the locals would find them easy to cheat and visitors may be duped and surcharged for services and goods. Secondly, western visitors' kindness may encourage child abuse because

local parents recognise that sending their children to beg on the streets may bring more money home than what parents can earn in the field or factory. These are also the negative consequences of demonstration effects.

Although some negative impacts can be associated with the development of tourism, it is not reasonable to blame tourism for all the negative effects on local societies, and observational learning is not responsible for the negative impacts on the locals. As mentioned before, Bandura (1977) indicates that observational learning differs from mere imitation learning, as it is a cognitive and a constant process. In many tourism destinations, the initial interactions between the visitors and locals may bring negative impacts to the locals, this may be because that both visitors and locals' observational learning often involve in partially imitation and partially cognitive observational learning.

The lack of mutual contact and understanding between the local societies and visitors is likely to be a reason for imitation. Increased knowledge and information of other foreign cultures can help better understanding of the others. Nonetheless, it is possible that a visitor does not fully understand the reason for a certain action and behaviour. By imitating others, the visitor may hope that the danger of misbehaving is minimised. In other words, since Bandura puts emphasis on social interactions between people, it would be reasonable to assume that in an unfamiliar environment, some visitors imitate the behaviour of locals and other visitors in order to be approved. Moreover, seeking recommendations about what to do/what not to do is another type of social learning. Instead of imitating others, a visitor can be proactive to combine the information they have gathered from observation and enquiry to create a set of actions considered appropriate. This would be an illustration of response creativity, which results from the visitor's cognitive thinking, reasoning, and processing the available information.

Hence, from a visitor's point of view, observing others is less risky, and sometimes even beneficial. They adopt the behaviour of others to enable them to fit in with local

society without embarrassing themselves. This is a cognitive thinking and reasoning process instead of mere imitation. An individual usually might have looked for a wide range of information from various media and sources before departing for a foreign destination. These media include literature, video, the Internet, family and friends. The individual searches for models, cognitively processes the information collected, combines it with what they observe locally, and shape their behaviour accordingly. There are times when the information gathered from the various models and media is not completely correct. For instance, a friend who had bad food poisoning in the destination may tell other prospective visitors how awful it is. In other words, the information the visitor is given is biased. In such a case, this visitor may need to experience the destination directly to learn about the site more fully.

3.2.3 Cognitive Learning Theories

Bandura's theory of observation learning indicates that cognitively processing the information is an important part in the learning-performance relationship. Without the cognitive process of arranging the collected information, much human behaviour may be difficult to explain. This cognitive process is in fact essential to help people to filter unnecessary information, and it is also important to people's learning procedures. According to Neisser (1967), cognition refers to the process of thinking and knowing. It involves an individual's reception of raw information and their transformation, elaboration, storage, recovery, and use of this information. Psychologists who emphasise the cognitive process consider that people are capable of using available information, processing the information intelligently, and further making rational decisions (Vander Zanden, 1980). This process requires the ability to organise the available information in a meaningful and complete manner. In other words, instead of seeing stimuli as isolated incidents, an individual is capable of linking them together into consequential and meaningful formations that "make sense" to them.

In the context of tourism, site-managing authorities provide information to visitors, in turn, visitors are expected to process and think the information cognitively prior their

engagement in particular behaviour. For example, visitors in a campsite in Yosemite National Park can see signs saying “Do not keep food in tents” and “Do not keep food in cars”. Visitors also see signs of grizzly bear tearing a tent off or smashing into a car window to grab food. Moreover, they may have heard stories of a grizzly attacking campsites and car parks. Usually most visitors are capable of connecting these various stimuli in order to draw up a picture that if food is not kept locked away, there is a possibility that they will be attacked by hungry wildlife. Furthermore, some visitors might realise that some wild animals are too used to getting food from visitors’ tents and cars and they may have lost their natural ability to survive. Hence, the Park management authorities do not wish animal feeding to be carried out. Others may conclude that since animals know that wherever there are visitors there is food available, there is great danger for both visitors and animals. Such conclusions made by visitors are results of cognitive process of thinking about and reasoning the available information.

Cognitive psychology is the study of how people use information from their surrounding environment and their memories to decide on how to respond (Vander Zanden, 1980). However, the same information received by two individuals may result in different responses. On the other hand, two people may have the same responses to similar but not identical information. This is because the cognitive process of interpreting, transforming and organising information is highly dependent upon what individuals’ previous experiences are and what they add to or subtract from them prior to the final response.

Piaget is considered one of the main contributors to cognitive psychology theories (Vander Zanden, 1980). He investigates the development of children’s cognitive process from birth to adolescence by observing a group of children intensively. Unlike many other psychologists, Piaget rarely uses large samples and complicated statistical procedures. In fact, much of his research is done by observing his own three children. His findings are often criticised because of his research methods, however, later research which involves more complex observations on large numbers of children is in

agreement with Piaget (Hergenhahn, 1982). In order to understand Piaget's cognitive learning theory, it is necessary to understand the terminology he used in his studies.

Schema and schemata

It is essential to understand the term "schema" in Piaget's theory. According to Piaget, a schema is the potential to act or behave in a particular way. Therefore, the schemata available to an individual will determine how he can understand and respond to his surrounding environment. For example, the "looking schema" refers to the general ability to look at things. Hence, the looking schema can be seen as an element in an individual's cognitive structures that facilitates the behaviour of looking. Since a schema is the potential to respond, there are two possible responses derived from a schema, that is, either it responds overtly as an obvious behaviour, such as looking at things, or covertly which can be roughly equated to thinking (Hergenhahn, 1982). As a child grows older, the way he deals with his surroundings will change. The new interaction between the child and the surrounding environment will then require new schemata available to the child and, therefore, his cognitive structures develop.

Assimilation

An individual's cognitive structures consist of a number of schemata at any given time. The process of responding to the environment that is consistent with an individual's cognitive structures is termed "assimilation" (Hergenhahn, 1982). That is, the information received by an individual is interpreted in accordance with their cognitive structures at that specific time, and the subsequent responses to the information are also assimilated into their cognitive structures. Changes of cognitive structure enable an individual to assimilate other aspects of their environment into their new cognitive structures. For example, if looking at moving objects and sucking are the only available schemata in a young child's cognitive structures, everything they experience will be assimilated with these schemata. Their eyes follow their parents, other members of the family and pets. If someone waves a stuffed doll in front

of the child, their eyes will follow it. Anything they have in their hands, a milk bottle, a stuffed doll, their mother's finger, or a crayon, they put into their mouth. Piaget believes that because the schemata available to this young child are just looking and sucking, therefore, this child experiences everything with looking and sucking schemata. When the child grows older, the schemata available in their cognitive structures will have developed more to enable them to assimilate other experiences with the more developed cognitive structure, for example, a crayon is for drawing, a stuffed doll is for playing with.

Accommodation

One may ask how an individual's available schemata and cognitive structures develop and modify. This process is termed "accommodation". There are aspects in an individual's environment that can be assimilated into their existing cognitive structures, and there are other aspects that their existing schemata cannot correspond with. If an individual can assimilate every incident around them into their existing cognitive structures, the individual's intellectual growth is unlikely to develop. In order to develop intellectual growth, the existing cognitive structures need to be modified in order to enable the individual to develop new perceptions of their environment. Piaget terms the process of modification of cognitive structures "accommodation". As a child grows up, their experiences expand, which results in the modification of their cognitive structures. Subsequently, their behaviour will change accordingly.

Accommodation occurs when there is no suitable cognitive structures available to the individual. Therefore, the individual needs to restructure and modify their existing cognitive structures to match the new experiences and perceptions. Piaget believes that an individual interacts with their surrounding environment constantly. This continuous interaction helps an individual establish new perceptions of the environment and in turn, the individual can organise their knowledge accordingly. The individual will try to modify their cognitive structures in order to match their new insights into the

environment. Consequently, the modified cognitive structures will reduce their mental disequilibrium status, which occurs when the individual cannot assimilate the new experiences (Hergenhahn, 1982).

In fact, people's intellectual development requires both assimilation and accommodation processes. Hence, one can draw a simplified path of how a person develops intelligence: an individual recognises information in their environment and reacts to it according to his previous experiences (assimilation). Due to the low possibility of identical experience recurrence, these differences in prior experiences initiate modifications in an individual's cognitive structures, that is accommodation (Hergenhahn, 1982).

Both assimilation and accommodation occur at all levels of intellectual development, although at an early age an individual tends to engage in more accommodation than assimilation. Experiences and knowledge accumulate and gradually the cognitive structures are formed. As a child grows up they will be able to assimilate much of what they have experienced into the existing cognitive structures without too much accommodation until they face something they have never experienced before.

Through this continuous process of assimilation and accommodation, when an individual interacts with their environment, the environment too may be altered by their reactions to it. Therefore, it is necessary for the individual to change their responses in order to adapt to the modified environment. For instance, in the 19th and early 20th century women did not have the right to vote, to go out to work, to wear trousers, and education was only for privileged people. Such phenomena have changed over the decades, and the environment now differs to what it was like before. In turn, most people need to adapt their views of these issues to keep up with the ever-changing environment. Therefore, Piaget concludes that intellectual development is the outcome of the processes of assimilation and accommodation, as well as an individual's adaptation to their surrounding environment (Vander Zanden, 1980).

Equilibrium and disequilibrium

Piaget believes that all organisms have an innate tendency to create harmonious relationships between themselves and their environment. This concept is called “equilibration”, that it is the drive to organise one’s experiences constantly to ensure that individual adapts to their surroundings to achieve an equilibrium status (Hergenhahn, 1982). For example, when the information received can fit in to the existing cognitive structure, the individual’s cognitive structure is in an equilibrium or balanced status. On the other hand, accommodation occurs when their cognitive structures are not balanced. Thus, seeking for equilibrium status can be seen as the motivation to keep an individual open to accommodating new perceptions into their existing cognitive structure until the equilibrium state is again achieved. Gradually the process of disequilibrium – accommodation – adaptation – reaching to equilibrium status – assimilation helps an individual develop intellectual growth, and learning occurs during the process (See Figure 3.1).

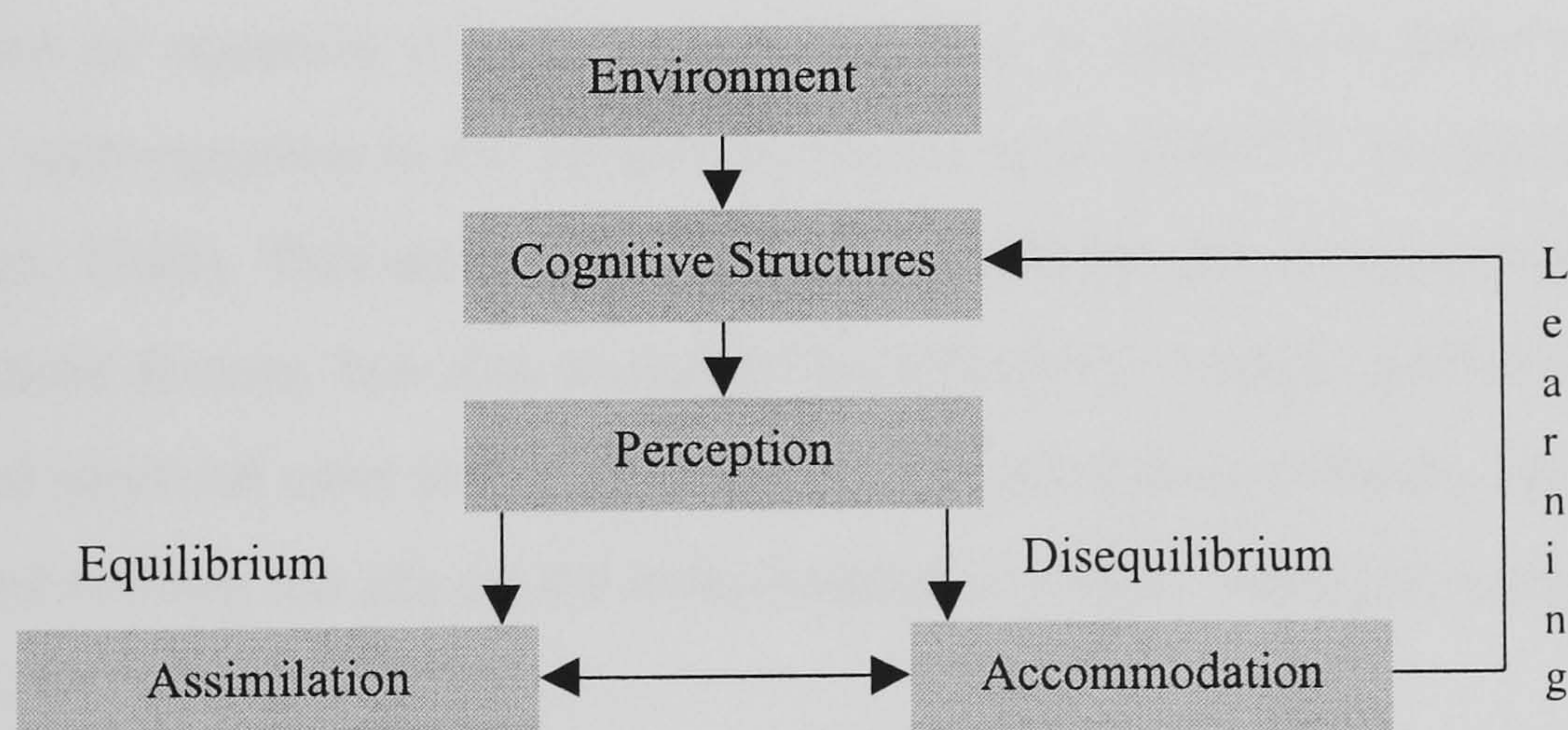


Figure 3. 1: The process of Piaget’s Cognitive Learning Theory.

Source: Hergenhahn, 1982.

3.3 OTHER RELEVANT THEORIES OF LEARNING AND BEHAVIOURAL MODIFICATION IN THE CONTEXT OF VISITOR MANAGEMENT

In the above section, the theories of conditioning learning, observational learning and cognitive learning are discussed, along with illustrations of these theories in the

tourism and visitor management context. The soft visitor management strategies, especially environmental interpretation and information provision, are considered an education-based management strategy, aiming to alter visitors' inappropriate behaviour to safeguard tourism resources from degradation (Orams, 1994; Tilden, 1977). However, there are differences between formal classroom learning and learning while an individual is participating in recreational activities during their leisure time. With respect to the provision of information and environmental interpretation programmes in tourism destinations, the learners are the visitors, and the teachers include local residents, staff in the tourism and hospitality industry who have contact with visitors, and destination managing personnel. Moreover, a wide range of media that deliver the destination information to the visitors such as literature and films, also act as educators (See Bandura's observational learning theory (1977) in the earlier section).

These "teachers" are generally not trained professional educators. They may lack thorough understanding of the relationships between learning and behavioural change and assume an equation of information receiving = learning = behavioural change. However, such equation is too simplified (Hines et al, 1986/87; Hungerford and Volk, 1990; Iozzi, 1989). This assumption not only overlooks the complicated relationships between these factors, but also excludes the affects of visitors' previous experiences, mental and physical state at the destination, background knowledge, interest and their purposes of visiting the site on the effectiveness of visitor management strategies.

Human's learning and behavioural modification, in fact, are the result of combinations of conditioning, observational and cognitive processes (Orams, 1994). In the context of visitor management, not only such combinations, but also the effects of an individual's experiences, emotions, values and attitudes have influence on visitors' perceptions toward the resources. Hence, it can be assumed that visitor management strategies in tourism destinations should focus on three components: providing visitors with information which can stimulate visitors' cognitive processes, applying positive and negative reinforcement to ensure the occurrence of the desired behaviour in situ,

and using a wide range of media to deliver information to facilitate visitors' observational learning. In addition, it is worth researching other factors that influence human's cognitive processes, such as emotions and value systems, as well as the effects of social norms, because these factors can affect an individual's intention to modify existing, and adopt new, behaviour.

The human mind and behaviour are complex and diverse. In the past two decades, cognitive psychology has dominated research into how people learn, accumulate knowledge and respond (Goetz et al, 1992). Thus, with respect to the education orientated visitor management strategy, that is, environmental interpretation and visitor codes, in order to make them more effective requires an understanding of human cognitive processes, and how to manoeuvre the factors that influence these processes (Orams, 1994; 1996a, 1996b; Knudson et al, 1995). Thus, this section is to explore other cognitive learning theories that have not been referred to previously, and their applications to visitor management strategies.

3.3.1 Festinger's Concepts of Dissonance, Consonance, and Irrelevance

Piaget's argument of mental equilibrium seeking is further developed by Festinger (1957). Festinger's (1957) principal concepts of cognitive psychology are dissonance, consonance and irrelevance. He explains that dissonance is that when two elements are inconsistent or in conflict. For example, an individual's habit of smoking, and their perception of "smoking is harmful to my health", are dissonant. On the other hand, consonance is when two elements are supportive or consistent, such as an individual believes that smoking is harmful to their health, and giving up smoking, that is consonant. Certainly there is a possibility that some give up smoking, or have never smoked before, for reasons other than health. When two elements have no relationship, or no effect on one another, they are irrelevant (Orams, 1994).

Festinger's (1957) central hypothesis is that the existence of dissonance is psychologically uncomfortable to an individual, which, in turn, makes the individual

to try to reduce the dissonance and achieve consonance. In other words, the greater the effects of dissonance upon an individual, the greater the possibility of modification in their belief. Festinger's suggestion is similar to Piaget's argument that all organisms tend to create balanced relationships between themselves and their environment, and the disequilibrium state motivates an individual to modify their existing cognitive structure to accommodate new information.

In general, this equilibrium seeking may be common practice. However, not all people have a tendency towards equilibrium. Piaget's concept of equilibrium/disequilibrium leads to his theory of the assimilation and accommodation processes of an individual's cognitive structures, which, is how Piaget believes people learn. Festinger's theory of cognitive consonance and dissonance, on the other hand, argues the sequential relationships between dissonance, change in belief, and consonance. Based on Piaget and Festinger's assumptions, if information received by visitors contradicts, or cannot be assimilated into, their existing cognitive structures, it may lead to tension or dissonance. The tension might stimulate them to modify their belief and new behaviour may occur. When such new behaviour is more appropriate and is desired by the destination managing authorities, the site benefits from the modified visitor behaviour. Hence, in the context of visitor management, in order to encourage visitors modifying their behaviour to be more appropriate on site, the initial step is to include dissonant information.

Such dissonant information does not necessarily have to contradict with what visitors believe in. Instead, with respect to the use of environmental interpretation and visitor codes, their functions are to stimulate and arouse the visitors' processes of cognitive development. Environmental issues are often seen and heard in the developed world. Nevertheless, unless people register such information in their cognitive structures, neither belief nor behavioural modification will occur. The information in environmental interpretation should stress the sensitivity of the resources, the changes of the environment resulting from human activity, and the consequences of losing the resources upon our lives. Visitors may have already possessed certain knowledge

about the sensitivity of the environment, the soft visitor management strategies in tourism destinations should aim to increase the tension in visitors' cognitive structures in order to foster the possibility of behavioural changes.

However, belief change does not equal behavioural modification. Furthermore, it might be possible that dissonant information fails to motivate an individual to reduce conflict in their beliefs in order to reach cognitive consonance. Sherif (1965) argues that when dissonant information is of large extent an individual engages selective perceptions to discount its effects in order to maintain their consonance. Thus, the dissonance caused by this particular information affects neither this individual's belief, nor their behaviour. Therefore, the personnel who are responsible for the design of interpretation programmes and visitor codes should consider the information does not go beyond the limit of what can visitors process it, or the soft visitor management strategies will have little effect.

3.3.2 The Application of Affective Domain in Learning

As mentioned above, an individual's value systems, emotions and attitudes may contribute to shaping their cognitive processes. These value systems and emotions are termed "affective domain". This concept was developed by Eiss and Harbeck (1972, p. 4), who argue that "The affective domain is central to every part of the learning and evaluation process. It begins with the threshold of consciousness, where awareness of the stimulus initiates the learning process ... It includes values and value systems that provide the basis for continued learning and for most of an individual's overt behaviour". They consider that an individual does not deal with knowledge only but also feelings and emotions, which are inseparable. Dewey (1933, in Iozzi, 1989) also stresses that intellectual force does not exist without attitudes, feelings and emotions, which enables people to be open-minded and responsible. Hence, both the affective factors and cognitive processes are important to an individual's effective learning (Iozzi, 1989).

Research into affective domain and environmental education is focused on classroom-based education of school children rather than environmental interpretation in tourism destinations. However, the findings are helpful to the personnel responsible in planning and designing interpretation programmes in tourism destinations. Iozzi (1989) summarises various research findings of the relationships between affective domain and environmental attitudes, and concludes that in classroom-based environmental education, the affective factors are important components. He recognises that environmental education programmes which include information related to feelings, worries, emotions and values are more effective in teaching students positive environmental attitudes and values. Moreover, Iozzi (1989) also argues that outdoor education is an effective way to improve environmental attitudes and values, as it provides school children opportunity to experience the natural environment directly. This thought should be encouraging to tourism destination personnel to promote visitors' recreational use of the site. This notion also echoes Tilden's (1977) stress of providing visitors with first-hand experiences of the site that they have come to see.

Nevertheless, Iozzi (1989) recognises that although in this research, environmental education may result in increased environmental knowledge and positive environmental attitudes, the increased knowledge is not sufficient to create positive attitudes. Other researchers suggest that knowledge of ecology does not produce environmentally friendly behaviour (Hungerford and Volk, 1990). Moreover, Fishbein and Ajzen (1975) argue that the relationship between knowledge and attitudes is complex and should not be assumed as a linear one. For example, a visitor to the Himalaya region may choose personal comfort and convenience, such as hot water showers and hot meals, even though they know that firewood is a scarce resource and they should limit their use of it.

3.3.3 Personality Factors – Attitudes, Locus of Control, Personal Responsibility

There have been research projects explored the factors and their influences on the relationship between visitors' learning and behavioural change resulting from interpretation. However, because these factors interact with one another, which, in turn, makes it difficult to examine what the most influential element is with respect to encouraging behavioural modification (Hines et al, 1986/87). The interactions between these factors also point out the possibility that the effect of one element might overpower the others, and consequently the outcome would be affected. In their research into environmental education, Hines et al (1986/87) suggest that these elements include personality factors, such as attitudes, locus of control, and personal responsibility, action skills, knowledge of action strategies and issues, situational factors, and intention to act. Based on the model developed by Hines et al, 1986/87), Hungerford and Volk (1990) further propose a flow chart of behaviour, as well as the variables involved in behaviour in the context of tourism.

One of the initial elements of successful interpretation is that the programme should attract visitors' attention (Ham, 1992). One way of attracting visitors' attention is to provide information that is dissonant to visitors' belief. It has been argued that in soft visitor management strategies, the information provided to visitors should be meaningful to them, relevant to their lives, worries and values, and touch their personalities, experiences and ideals (Ham, 1992; Tilden, 1977). This thought can be related the concept of affective domain suggested by Eiss and Harbeck (1969) which was discussed earlier. It also implies that an individual who has concern about environmental issues and has a sense of obligation towards the environment, after their receiving of information, they may be motivated to develop more positive attitudes, which are essential to an individual's decision making and action taking. Although attitudes do not always result in behaviour, an individual with positive attitudes is more likely to act than one whose attitudes are negative.

Locus of control is a general concept (rather than being limited to the context of tourism) that refers to an individual's perception of whether they have the ability to produce change through their own behaviour. Some individuals do not attempt to create change because they accredit change to chance or powerful others, for instance, governments, peers, or God. This perception is termed "external locus of control". Individuals with internal locus of control perception, on the other hand, believe that their behaviour or responses are likely to have an impact (Peyton and Miller, 1980, in Hines et al, 1986/87). Locus of control may be related to an individual's perception of whether their certain activity or behaviour would be reinforced or rewarded. An individual with internal locus of control may expect success, approval from others, or another form of reinforcement, for behaving in a particular manner (Hungerford and Volk, 1990). According to the theories of conditioning learning, behaviour that is reinforced is likely to recur. Thus, when an individual experiences success, their internal locus of control can be strengthened. On the other hand, an individual with external locus of control does not expect reinforcement, nor does the individual believe that their behaviour will have an impact.

In some situations, this argument may be referred to as the extinction of particular behaviour (See Skinner's operant conditioning (Hergenhahn, 1982) in earlier section), since the outcome of that behaviour no longer satisfies the individual. In tourism destinations, if visitors consider that appropriate behaviour such as not littering, not harassing wildlife, respecting the locals and their culture, will make the destination a better community, they may be more willing to modify their inappropriate behaviour. Furthermore, they might be more likely to behave appropriately in their own home communities and other tourism destinations. On the other hand, if visitors consider that their efforts will have no effect, they will not be keen on modifying their attitudes and behaviour and helping the site-managing agencies to protect tourism resources.

3.3.4 Knowledge of Issues, Action Skills, and Knowledge of Action Strategies

Prior to an individual's modification of behaviour, it is necessary that the individual acquires relevant knowledge. As mentioned previously in the various theories of learning, the final response of behaviour results from the accumulation of experiences. Hence, awareness and knowledge of a problem is viewed to be a prerequisite to action (Hines et al, 1986/87). In other words, if visitors are expected to modify inappropriate behaviour, they should be made aware of the negative impacts of their behaviour. Thus, if there is no information available, the majority of the people will assume that everything is all right. The knowledge of action strategies is also important. In the case of tourism, visitors should be made aware of what behaviour and activity they can participate in to ensure that their visit is enjoyable and that their activities are not incompatible with the management and protection of the resources. For example, site-managing agencies can involve visitors more proactively by promoting special activities such as cleaning up the woods, cleaning up the beaches, and organising tailor-made flora and fauna study trips, to deliver the knowledge of the resources, the problems and the more appropriate behaviour to visitors. In so doing, visitors' knowledge and knowledge of action skills are increased, which is essential to successful visitor management.

This proactive style of visitor management strategies should be used more widely in tourism destinations. It is erroneous to assume that increased knowledge will naturally produce the desired skills. For example, an individual may know how to play football "mentally" after watching a game and listening to a coach's instruction. However, they will need to practice for a period of time before they acquire the skills. An action skill is an individual's ability to convert their knowledge of an issue into appropriate action. In the case of tourism and visitor management, every destination has unique features and problems. What actions visitors can take in order to minimise their negative impacts on the resources and to help the management and protection of the resource are therefore site-specific. Hence, except for general environmental

knowledge, for example, not littering, information provided to visitors should advise visitors about action strategies, as well as how to apply those strategies.

Furthermore, in order to suppress the occurrence of inappropriate behaviour, site-managing authorities can apply punishment that discussed previously in the section of operant conditioning, such as charging fines. In other words, the foundation that various strategies of visitor management in tourism destinations is based upon finds its support from the studies of behavioural modification and learning in the formal settings.

3.3.5 Intention

An individual who has the intention to undertake a particular action is more likely to engage in that action than the one who has no intention to do so. According to the research conducted by Hines et al (1986/87), intention to act is the outcome of the combination of elements such as personality factors, knowledge, and action skills. A meaningful and stable change in behaviour which requires an individual to obtain knowledge and skills, and they have to have intention to act. In other words, intention can be seen as the indicator of the occurrence of an action or behaviour.

Hines et al (1986/87) suggest that situational factors can either interrupt or strengthen the pathway to taking action. These factors include economic constraints, social pressure and opportunities to choose different action. When an individual has environmental knowledge, the ability and intention to recycle and purchase goods made from recycled material is likely to increase. However, if the price of the products made from recycled material is of poor quality, or is more expensive than the product made from brand new material, this individual may not be encouraged to purchase it. Moreover, if the recycling centre is far from them, inconvenience may be an excuse for not recycling household waste. Furthermore, as the previous example in the earlier section of the mountaineering visitors to the Himalayas, the desire for hot showers and

meals in such a harsh environment may outweigh the wish to limit their use of firewood.

On the other hand, situational factors can encourage an individual to adopt environmentally friendly behaviour. In the Manuel Antonio National Park, Costa Rica (León, in Ham, 1992), and in Ellesmere Island, Canada (Macklin, 1991, in Mason, 1997), one way of tackling rubbish left behind on site is to charge refundable deposits in order to ensure visitors bring out what they brought in, which may be a factor contributing to their intention to act. That is, visitors change their behaviour according to the situations they are in. If the situation force them to adopt more appropriate behaviour, as is the case of Manuel Antonio National Park and Ellesmere Island, visitors are more likely to participate in the desired behaviour. Referring to the operant conditioning, the situational factors act as either positive or negative reinforcement to encourage or discourage the occurrence of particular behaviour.

Hines et al (1986/87) propose a model of responsible environmental behaviour (See Figure 3.2).

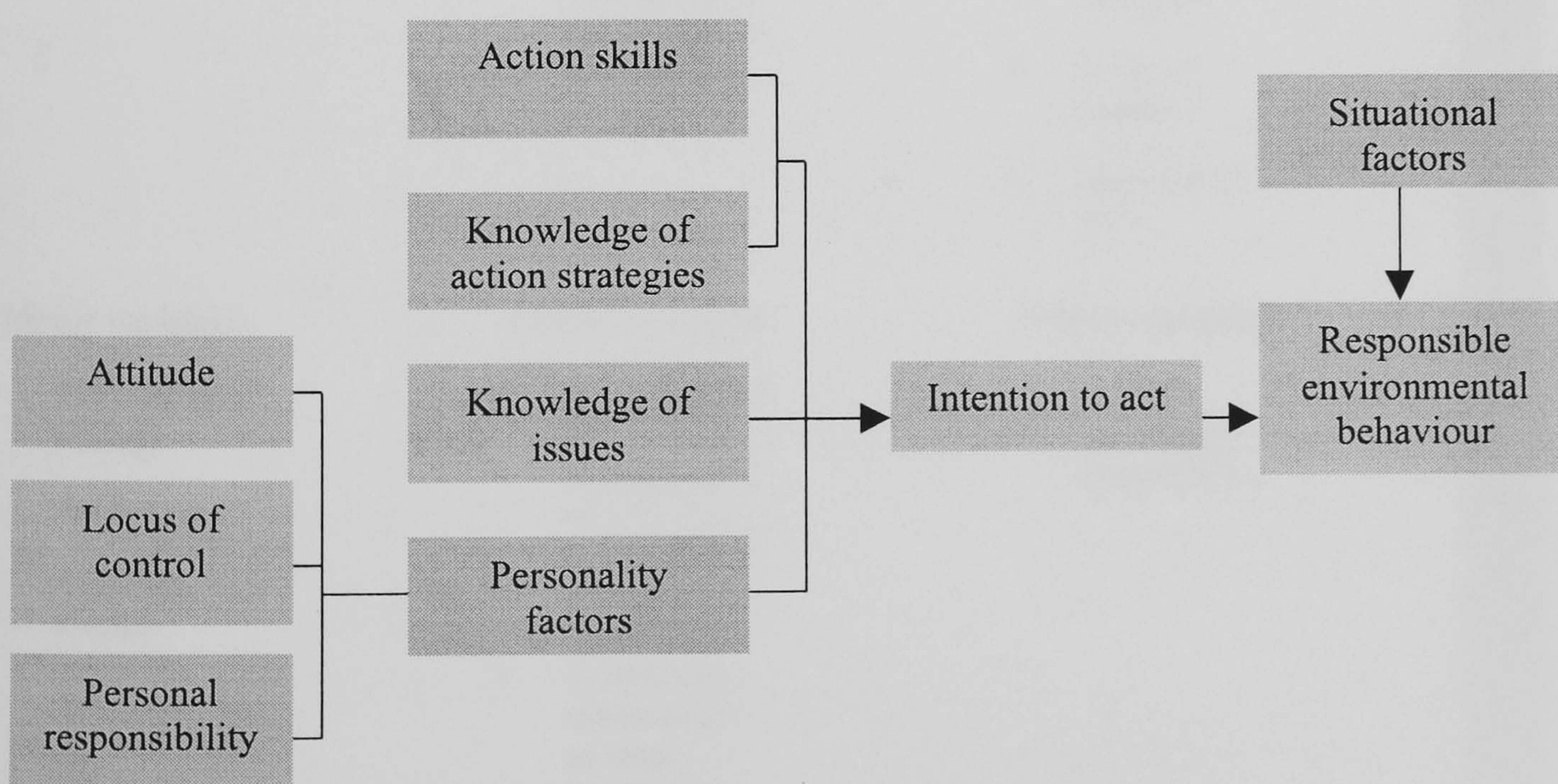


Figure 3. 2: A Model of Responsible Environmental Behaviour.

Source: Hines et al, 1986/87.

3.3.6 Hungerford and Volk's Citizenship Behaviour Flow Chart

Hungerford and Volk (1990) combined the studies of behaviour conducted by other researchers (Borden, 1984/1985; Borden and Powell, 1983, Sia et al, 1985/1986, both in Hungerford and Volk, 1990) and the model of responsible environmental behaviour proposed by Hines et al (1986/87), and conclude that there are three possible categories of variables that contribute to behaviour. These three categories, entry-level variables, ownership variables, and empowerment variables, are hypothesised to operate roughly in a linear, yet complex, fashion (See Figure 3.3). Hungerford and Volk (1990) suggest that while these categories may operate in a linear relationship, the variables in each category do not necessarily operate in the same manner.

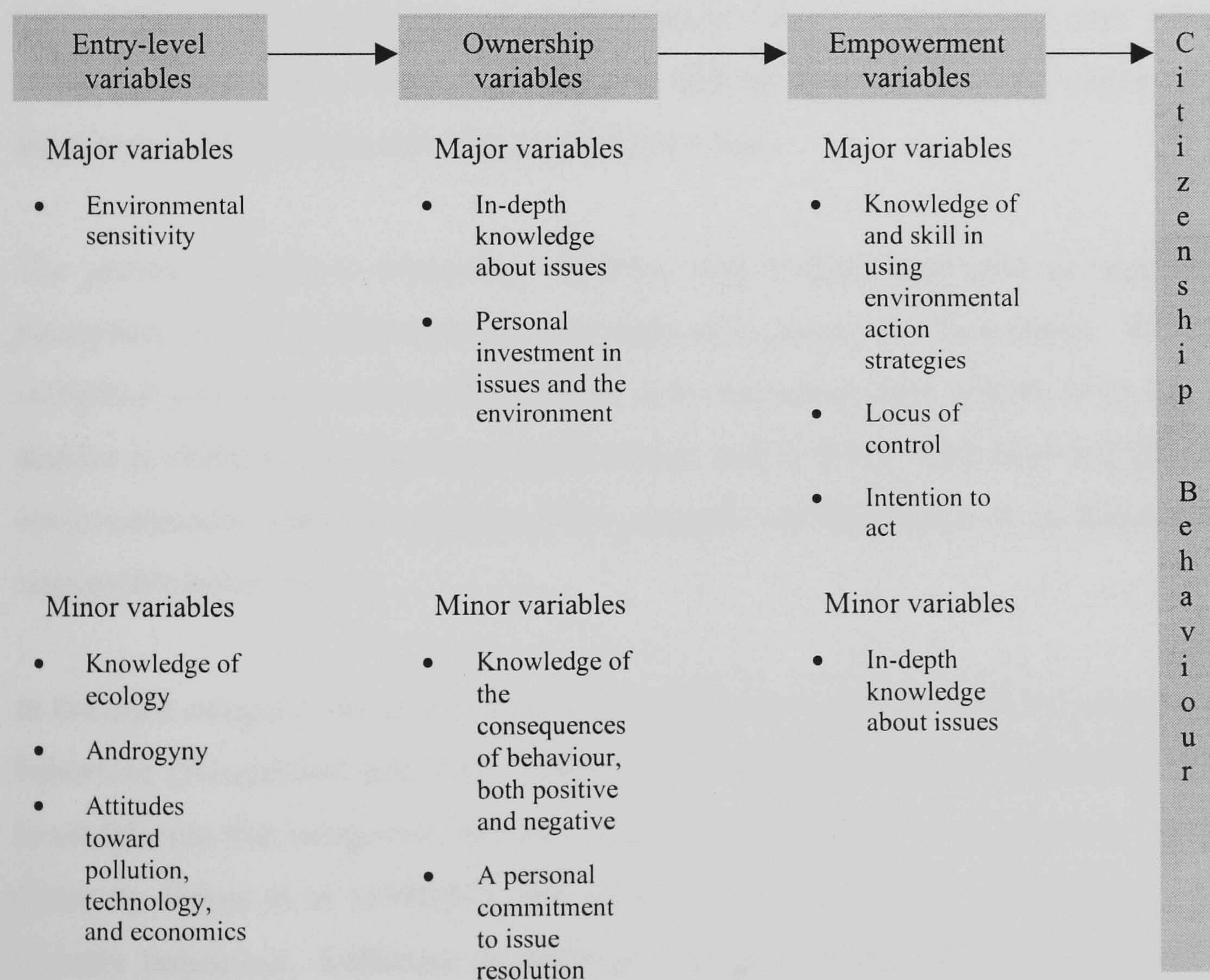


Figure 3. 3: Behaviour Flow Chart based on the research into classroom based environmental education.

Source: Hungerford and Volk, 1990.

At entry-level, Hungerford and Volk argue that the environmental sensitivity variables are good predictors of behaviour that appear to be related to responsible environmental behaviour. Environmental sensitivity involves empathy towards the environment. It shows a strong relationship with responsible behaviour in the research conducted by Sia et al (1985/86, in Hungerford and Volk, 1990), and, therefore, it is a major variable at entry-level. It may also contribute to an individual's pursuit of in-depth environmental knowledge. In the minor variable section, androgyny, in a psychological sense, is a factor that is associated with an individual who is active in resolving environmental issues. However, it does not demonstrate as a predictor as environmental sensitivity. Knowledge of ecology, although important to the understanding of the consequences of action, does not produce environmentally responsible behaviour. Attitudes toward pollution, technology and economics may make a significant contribution to environmental behaviour (Marcinkowski, 1989, in Hungerford and Volk, 1990), but there is a lack of research into their effects. Thus, they are treated as minor variables in the Flow Chart.

The second category is ownership variables, and is dependent upon an individual's perception of the importance of environmental issues to themselves. When an individual perceives environmental issues to be important, they will be more likely to acquire in-depth knowledge about such issues, and to invest their time and efforts in environmentally friendly activities. This category can be critical to environmentally responsible behaviour.

In the third category, the empowerment variables are crucial in inculcating responsible behaviour (Hungerford and Volk, 1990). Not only do knowledge, skills and intention to act fall into this categories, but also locus of control, which is considered a personal factor by Hines et al (1986/87), has effects on the production of environmentally friendly behaviour. Sufficient knowledge and skills assure the appropriateness of behaviour; and an individual's internal locus of control encourages their intention to act.

The Behaviour Flow Chart illustrates a linear relationship between the variables that contribute to responsible behaviour toward the environment. It does not differ dramatically from the model proposed by Hines et al (1986/87, See Figure 3.2). The Flow Chart provides the managing authorities of tourism destinations with the factors that need to be considered when planning the soft strategies of visitor management. For example, visitors who have little knowledge about the site should be made aware of the sensitivities of the natural and cultural resources firstly in order to arouse their awareness of the problems and develop their knowledge of such issue. Once they have acquired sufficient knowledge about the site, the information provided should emphasise the current management and conservation work of the resources, and how they can help to improve it. It may be effective if site-managing agencies inform visitors of what actions they could carry out to help the management and protection of the site, and how important their appropriate behaviour contribute to the management of the destination. In so doing, visitors' internal locus of control can be fostered, and therefore, their intention to modify their inappropriate behaviour is likely to be increased.

3.3.7 Mindlessness and Mindfulness Mental State

Often an individual develops their daily routine and follows it to solve everyday needs and problems. Sometimes their routines of acting or responding have become a habit, even when they are confronted with a new situation or information, they respond to it using their established routines with little thinking. For instance, a couple decides to move their daughter from one school to another. It is usually the father who drops off the daughter at school in the morning. After she has been transferred to the new school, one morning the father suddenly realises that he is driving her to her old school. In this case, the father follows his usual routine without noticing that the situation has changed. This is mindlessness. The father cannot be said that he does not think, but he does not think about the new information. Therefore, mindlessness is defined as "a mental state where there is little questioning of new information and

where individuals are mentally passive and are processing the environment according to pre-existing scripts and routines” (Chanowitz and Langer, 1980).

On the other hand, mindfulness is characterised by careful attention to a task/activity and analytic processing of information resulting in changes in cognitive structures (Chanowitz and Langer, 1980). According to Alexander et al (1989, p.951), mindfulness is defined as a “mode of functioning through which the individual actively engages in reconstructing the environment through creating new categories or distinctions, thus directing attention to new contextual cues that may be consciously controlled”. In other words, the difference between being mindless or mindful depends on whether an individual pays attention to their surrounding environment. Therefore, mindfulness is necessary to notice and process new information, because if an individual is mindless the new information will not be noticed (Moscardo, 1999).

The concept of mindfulness and mindlessness applied to interpretation of the soft visitor management strategies derives from the research conducted by Moscardo and Pearce (1986). They analysed the data originally collected by the Countryside Commission on seventeen British visitor centres to explore the relationships between variables such as visitors’ enjoyment, their information recall and mindfulness, and the effectiveness of environmental interpretation at those destinations. Mindfulness, in this case study, is an indication of an active mental state. Visitors were measured by their information recall, subject knowledge, and wanting to know more about the topic and the centre to determine whether mindfulness and visitor enjoyment are related. The research findings show that there is a moderately positive rather than a strong relationship between mindfulness and visitor enjoyment. However, researchers admit that the survey of direct factual questions about visitor centre displays may not be a sufficient measure of visitors’ learning experiences of the exhibitions at the visitor centres.

In general, tourism destination managers and interpreters have long believed that visitors’ positive learning experiences and enjoyment are mutually connected (Ham,

1992; McArthur, 1994; Tilden, 1977). Visitor enjoyment is also determined by other factors, such as the comfort and convenience they perceived at the destination during their visits, assistance offered by the site personnel, traffic conditions, and available activities to carry out. Furthermore, there are times when weather can either enhance enjoyment or otherwise. Thus, using visitors' learning experiences of the exhibitions at the visitor centres as a single indicator to measure visitors' enjoyment is insufficient. Nonetheless, the research findings demonstrate that mindfulness has effects on visitors' positive learning experiences and their overall enjoyment of their visits to the sites.

In the latter research, Moscardo (1999) stresses that the mental states of mindlessness and mindfulness refer to different ways of thinking, not merely different amounts of thinking. Mindless behaviour occurs when an individual uses a familiar routine to process the information. Mindlessness also occurs when information is thought of not relevant to an individual in a given situation. For example, visitors prior to their holiday departure may pay more attention to the weather forecast of the destination, since this information is relevant to them. If they are not going there, the weather forecast has little or no effect on them, thus they might ignore it or forget about it shortly after. Furthermore, when visitors repeat their visits to a site, they may be less mindful, as they are more likely to act based on previous experience. Therefore, in the case of soft visitor management strategies, especially information provision and environmental interpretation, it is necessary to provide various programmes, and preferably involving visitors to use their various senses, including seeing, hearing, touching and smelling. For instance, the provision of different activities and information in accordance with the seasonal changes or various themes relating to the destination offers repeat visitors a "new situation". Hence, visitors are less likely to borrow old routines but need to modify their existing cognitive structures to accommodate the new information. Moreover, it is more difficult to develop a routine in a changing environment. Based on her research, Moscardo (1999) proposes a model of mindful and mindless communication with visitors in the context of environmental interpretation (See Figure 3.4).

This concept of mindfulness and mindless partially reflects Piaget's theory of assimilation and accommodation cognitive processes. Individuals who are in a mindless state either ignore the information received, or assimilate it into their current cognitive structures. On the other hand, mindful individuals actively process newly received information, and if necessary, modify their cognitive structures to accommodate it. However, the mindfulness/mindlessness concept does not stress that the new information has to be dissonant, instead, Moscardo (1999) suggests that novelty, conflict and surprise are effective communication factors. Providing dissonant information is just one way to arouse an individual's attention. An individual is likely to pay more attention to information that interests them, not just because that information causes dissonance. Thus, this concept of mindfulness and mindlessness can be related to the suggestion that interpretation should be meaningful and relevant to people in order to attract attention and arouse enthusiasm for the site (Ham, 1992; Tilden, 1977).

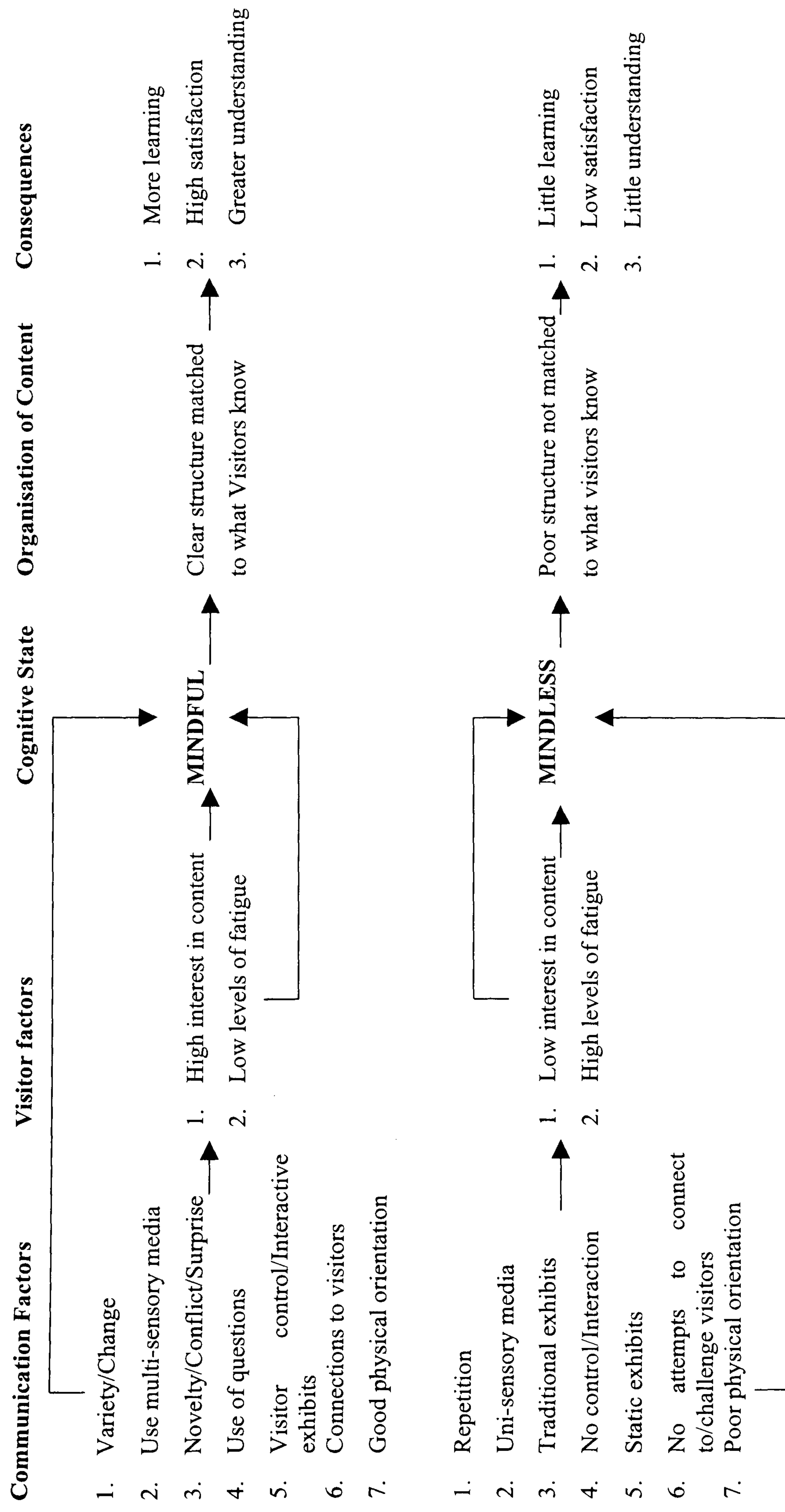


Figure 3. 4: Mindfulness Model for Communicating with Visitors

Source: Moscardo, 1999.

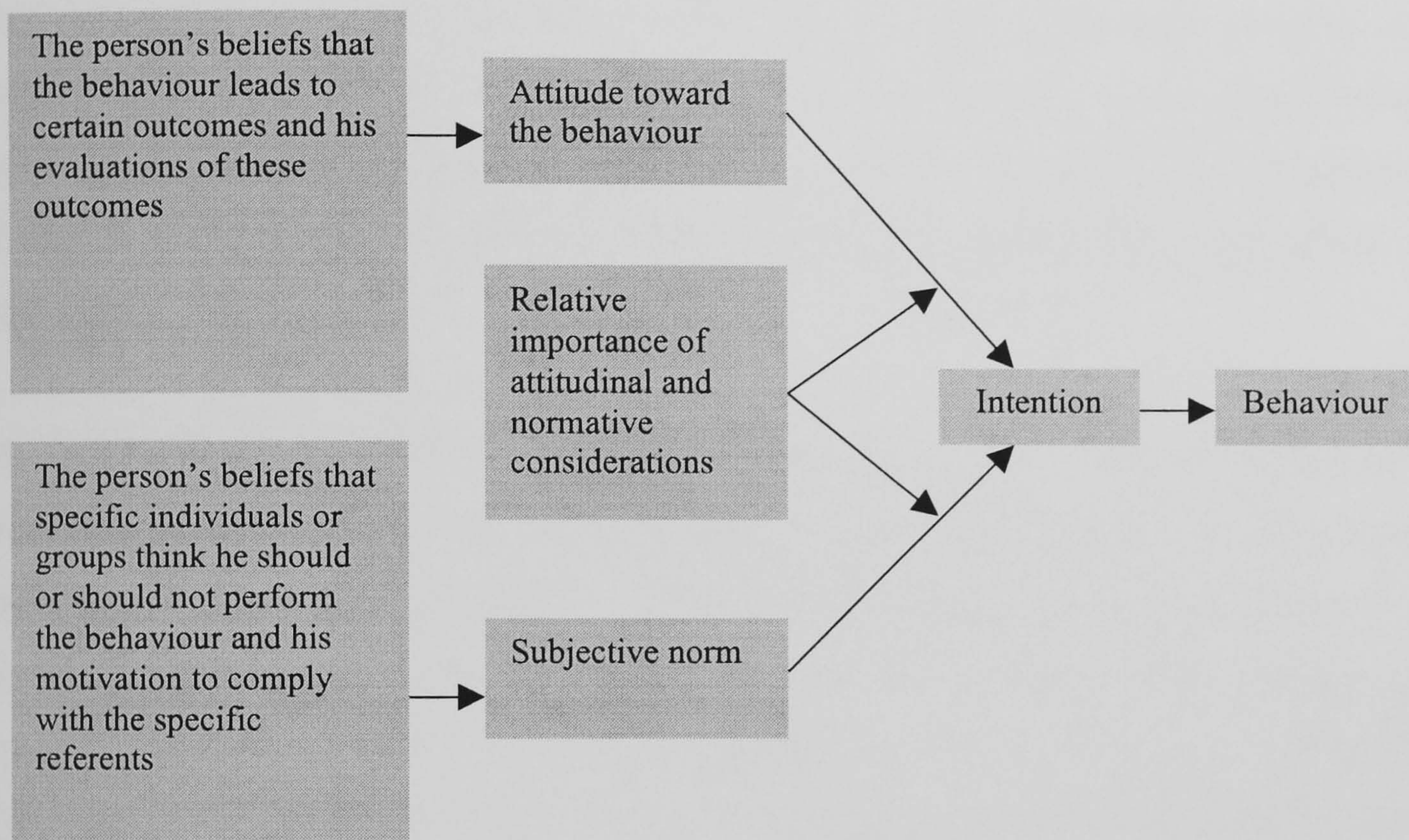
3.3.8 The Theory of Reasoned Action

The Theory of Reasoned Action assumes that people use information in a rational fashion to decide what behaviour to adopt. Therefore, an individual's belief will affect their process of information, subsequently, their behaviour will be affected. The basic concept of this theory is that there are two key factors influencing an individual's intention to act, namely personal attitudes and subjective norms (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). In comparison to the Model of Responsible Environmental Behaviour proposed by Hines et al (1986/97), and the Behaviour Flow Chart developed by Hungerford and Volk (1990), The Theory of Reasoned Action also indicates that an individual's intention to act is an essential precursor to the occurrence of behaviour. Moreover, Ajzen and Fishbein (1980) argue that there are influences from other members in the society that contribute to the formation of an individual's intention (See Figure 3.5). This suggestion reflects Bandura's (1977) suggestion of observational learning as social learning, and peoples' influence on each other.

Ajzen and Fishbein (1980) point out that an individual's attitudes toward behaviour stem from their personal beliefs and their evaluations of particular behaviour. In other words, what an individual believes and how they evaluate the outcome of behaviour will affect their attitudes toward that particular behaviour. They state that "...behavior change is brought about by producing changes in beliefs" (Fishbein and Ajzen, 1981, p. 342). Thus, when an individual believes that a particular behaviour is good, and its outcome is positive, this will lead to a positive intention to act.

Subjective norms, on the other hand, are determined by an individual's beliefs of what significant others think about whether they should or should not act. In turn, this individual's perception of others' thoughts motivates the individual to comply with them. These other people are usually considered important in an individual's social group or society. Their influences on this individual's motivation depend upon how important they are to the individual. However, these two key factors do not operate in

the equal significance. There are situations when either personal attitudes or subjective norms prevail over one another, consequently, the intention to act and behaviour is affected accordingly. Moreover, other intervening circumstances may temporarily or permanently modify the behaviour.



Note: Arrows indicate the direction of influences

Figure 3. 5: Model of Reasoned Action.

Source: Ajzen and Fishbein, 1980.

There are various examples of the interactions between personal attitudes and subjective norms in the tourism context. Some people believe that purchasing goods made from endangered wildlife is immoral, and that not buying them will be beneficial to the animal. People in their social groups may have different attitudes toward purchasing goods made from endangered animals: one's attitude is that no one should buy these products, and another may think that possessing unique items made by unusual materials is a symbol of power and social status. When they travel to an exotic destination, say, to an African country and they are offered to buy souvenirs made from ivory. Some people are unlikely to be persuaded to purchase since their attitudes are stronger than the subjective norm of possessing ivory as a symbol of

higher social status. Some visitors will purchase the ivory products, as their social group members may judge social status by the possession of such materials. Also, there are some visitors who cannot decide whether or not they should purchase the ivory products. Some visitors, although they are against ivory products, might still purchase them for their friends or family because they have different attitudes and they are considered important members in their groups. Hence, personal attitudes and subjective norms are just two key factors affecting the intention to act. Other factors, such as the situational factors suggested by Hines et al (1986/87), for instance, financial constraints and other available alternative opportunities, will affect an individual's behaviour.

Ajzen and Fishbein (1980) agree that other external factors, such as demographic background, extant attitudes, and personal traits, can influence an individual's behaviour. However, these factors do not function directly in the formation of an individual's intention. They influence an individual's thoughts or their attitudes and subjective norms, instead of directly determining the occurrence of behaviour (Kundson et al, 1995). Gifford et al (1982, in Knudson et al, 1995) support the notion that individual differences such as education and sex are correlated with environmental attitudes. Thus, these factors can be integrated into the Model of Reasoned Action to offer a more complete picture of the formation of behaviour (See Figure 3.6). However, according to Iozzi (1989), the relationships between demographics such as knowledge, education, socioeconomic status and sex, and environmental attitudes are conflicting and inconclusive.

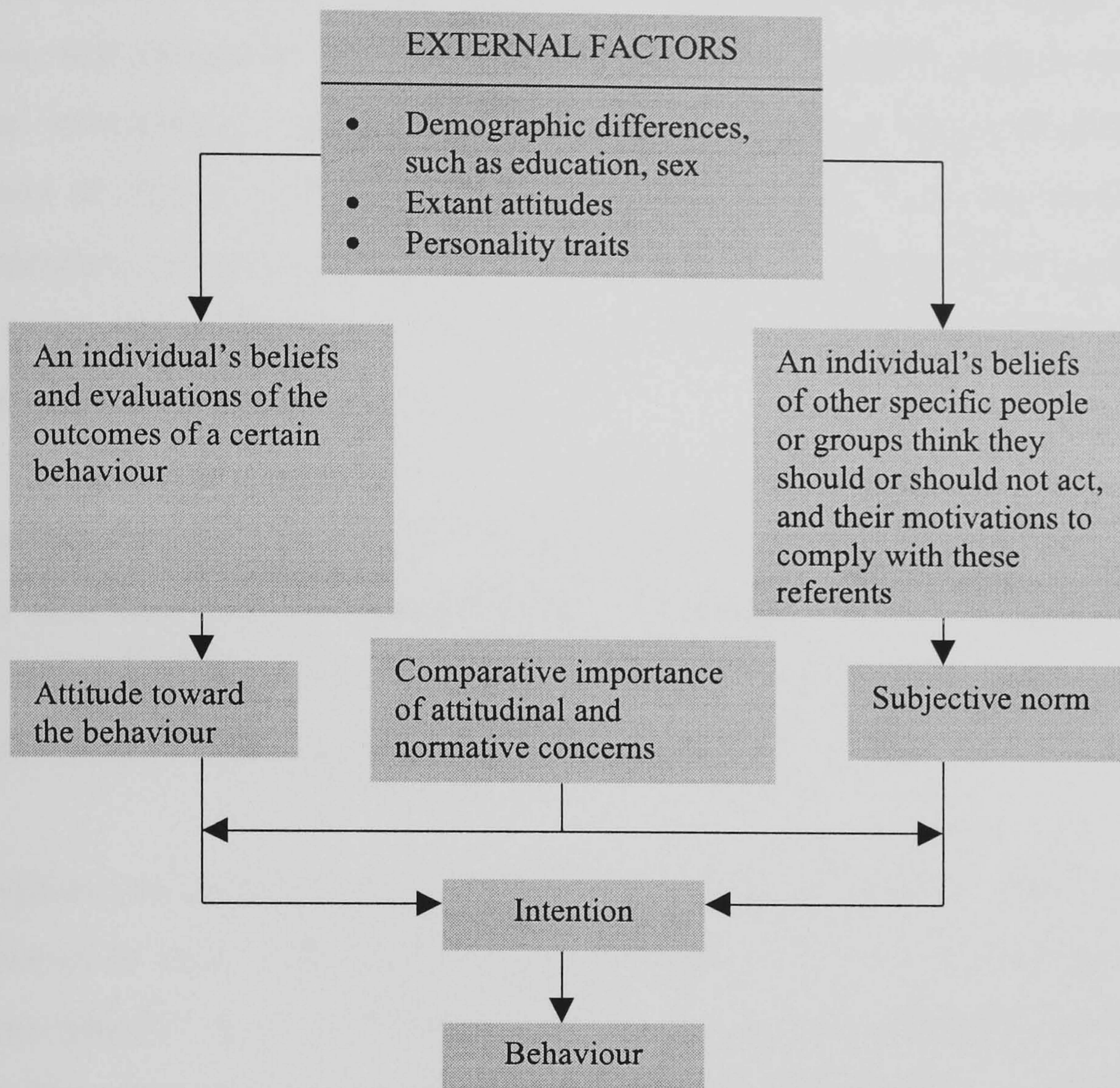


Figure 3. 6: Model of Reasoned Action integrated with external factors.

Source: Derived from Knudson et al (1995).

CONCLUSION – THE APPLICATION OF LEARNING THEORIES IN VISITOR MANAGEMENT STRATEGIES

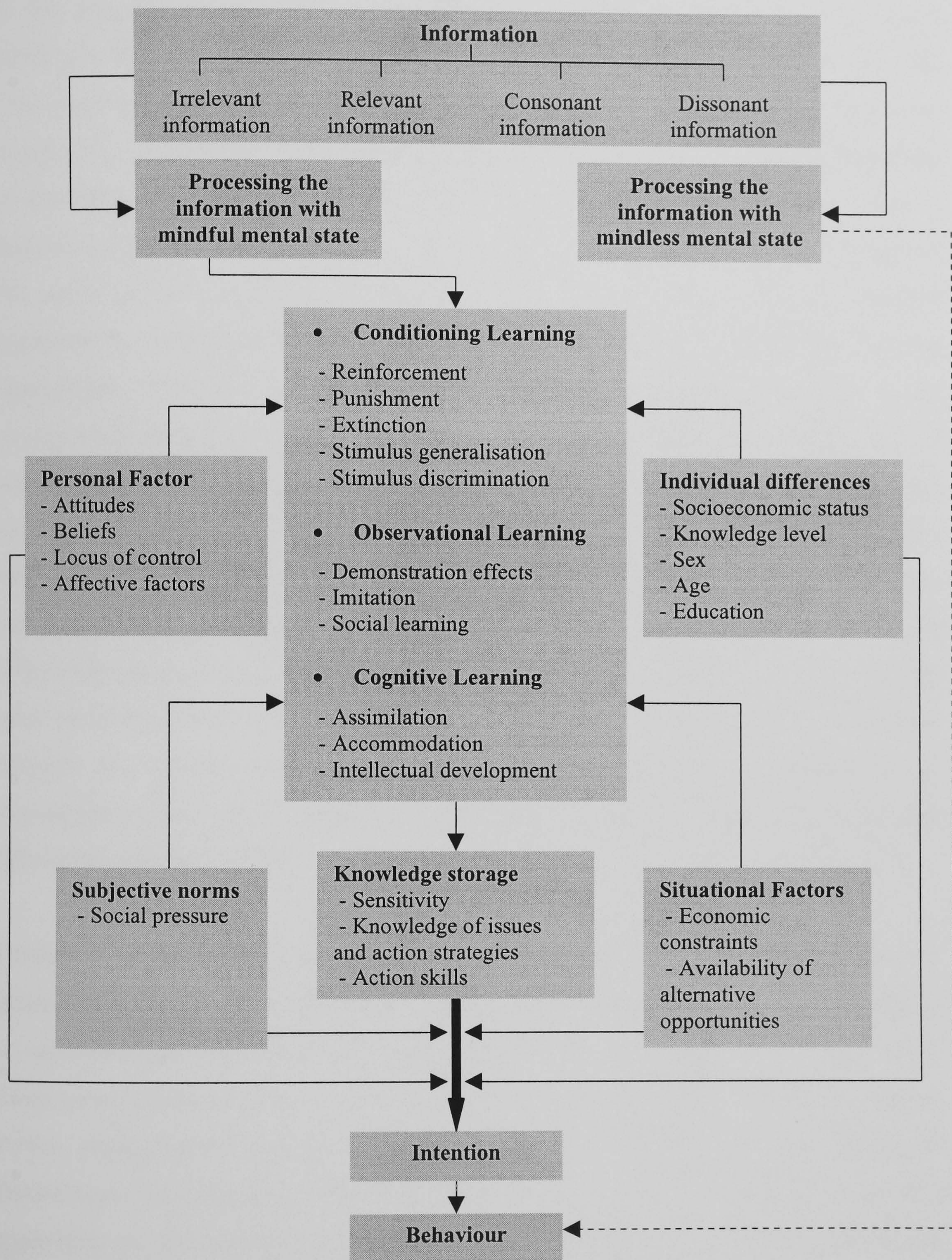
People's learning activity is a complex and dynamic process, and the behavioural change is influenced not only by learning, but also other factors. From the above discussion, it is believed that the relationship between learning and behavioural modification is neither definite nor linear. The factors that are involved in shaping an individual's behaviour include their intention, mental status, situational factors, personality factors, knowledge, action skills, and subjective norms. Among these factors, an individual's intention to act is suggested to be the precursor of behaviour, and, locus of control, sound knowledge of the issues and action strategies, as well as

the skill to act, can directly affect intention. Furthermore, the knowledge, beliefs, evaluations, and the mental state of mindfulness or mindlessness, help to form and modify an individual's cognitive structures. Hence, wanting hard and soft visitor management strategies to be effective, an understanding of not only the conventional learning theories such as conditioning, observational and cognitive learning theories, but also these various factors should all be taken into consideration at the planning stage of the visitor management strategies.

The following diagram proposed by the researcher is an illustration of how visitors learn and what factors affect their behaviour (See Figure 3.7). It is hoped that this model is able to provide a picture for tourism destination managers of what elements they should consider when planning visitor management.

In the diagram, various types of information are provided to visitors, and is processed and evaluated by them either mindfully or mindlessly. Visitors then categorise the information into four types: irrelevant, relevant, consonant and dissonant information. When visitors process the information mindfully, the information is learned and memorised, and their intention to act in a specific manner may be fostered, despite the influences from the factors such as personal, subjective norms, individual differences and situational factors. On the other hand, when visitors process the information mindlessly, the above mentioned procedure is unlikely to occur. Instead, visitors continue to behave in the same way they are used to. In the diagram, the processing information mindlessly and the resulting behaviour is shown in dotted line.

It is necessary to point out that the process shown in the diagram does not consider how visitors receive information but focuses on visitors' learning and the occurrence of behavioural modification. The delivery of information to visitors is within the scope of communication theories, which is explored in the next chapter.



Note: Arrows indicates the direction of influences.

Figure 3. 7: Proposed model for effective learning and behavioural modification in the context of visitor management at tourism destinations.

In the diagram, the irrelevant information is unlikely to attract an individual's attention, therefore, such information is less likely to be processed cognitively. The other three types of information will be learned and stored in this individual's memory cognitively, and it may subsequently influence their receptions of further information at later stage. Nevertheless, it is necessary that the individual is in a mindful state to receive and process the information. In the case of visitor management, the target of the above process should be to encourage visitors to develop sensitivity towards resources in a destination, and knowledge of the resources, their impacts, and the appropriate activities they can participate in, while observe the hard visitor management strategies. Hence, this knowledge should enhance their awareness of resource protection and site management. In the ideal situation, the increased knowledge and awareness will then enhance their enjoyment and understanding of the resources, and their intention to modify their behaviour will be fostered. However, other variables such as personal factors, subjective norms, situational factors and the differences between individuals also affect behaviour. It is difficult to know visitors prior to their arrival to a site. Therefore, it is only possible to survey site visitors to forecast the probable general visitor background, which can be referred to the discussion in the previous chapter the importance of visitor research and monitoring (McArthur and Hall, 1996b).

Furthermore, the initial requirement of effective visitor management is that the information, whether it is directorial, administration/management related, regulatory or education type, should be delivered to visitors, in other words, visitors should be made aware of the presence of such information. The successful use of hard and soft visitor management strategies relies on visitors' awareness of these strategies. Punishments can be applied when visitors' behaviour breaches the law and regulation applicable to the destination, however, the occurrence of visitors' inappropriate behaviour might be because of their lack of knowledge. In other words, successful communication with visitors is the key factor in effective visitor management. In the next chapter, communication theories and methods are discussed and issues relating to visitor management strategies are explored.

CHAPTER FOUR

COMMUNICATION AND PERSUASION

INTRODUCTION

Most communication activities are purposive (Burgoon et al, 1994). That is, people communicate to accomplish their tasks, such as informing others, relating to others, obtaining information, decision making, or entertaining one another. Communication occurs regularly in people's daily life, however, it does not necessarily imply that people master communication strategies and skills. Often people say "there is a communication break-down between us", because they fail to achieve their communication goals. In fact, communication does not "break-down", the process is still on going, but it is not reaching the desired result by the communicator and/or the receiver.

There are several factors that may contribute to communication failure. They can be divided into three groups: source variables, receiver variables, and external variables. For communication to be effective and successful, it is necessary to understand the influences of these variables and how to counteract them in order to optimise communication processes. Thus, the purpose of this chapter is to provide a general knowledge of the functions and processes of communication. Since the research is into visitor management techniques, the discussed communication theories and strategies will be focused upon their application in a tourism context. Therefore, only the three major roles communication plays in visitor management will be looked into, namely informing, entertaining, and educating/persuading visitors.

The application of communication strategies to inform, entertain and persuade visitors helps tourism destination managers to deliver messages to visitors, such as recreational opportunities, general visitor information, site-specific information, and

desired behaviour. In so doing, visitors are expected to understand and enjoy the area more, and, therefore, be willing to modify their behaviour accordingly to prevent resource degradation. Hence, the persuasive strategies in communication with visitors are especially important in visitor management. This chapter includes a section on the understanding of the source and receiver's variables that can influence the effectiveness of communication, as well as the application of persuasive communication in the context of visitor management.

4.1 COMMUNICATION

The Collins English Dictionary (1994, p. 326) defines "to communicate" as "to impart (knowledge) or exchange (thoughts, feelings, or ideas) by speech, writing, gestures, etc; to allow (a feeling, etc) to be sensed (by), willingly or unwillingly; transmit (to); to have a sympathetic mutual understanding". Communication, the noun, is defined as "the act or an instance of communicating; the imparting or exchange of information, ideas, or feelings". The definitions of communicate and communication indicate that it is a process of at least two parties in the practice of sending and receiving information. Also, there is the medium used to deliver this information, and the medium can be either personal or non-personal. Television and radio programmes, newspapers, magazines, brochures and flyers, the Internet, family and friends, colleagues and strangers, are just some sources through which an individual can send and receive information. Nevertheless, it is worth indicating that the information an individual receives may or may not affect their feelings, attitudes, beliefs, and behaviour.

One may judge the effectiveness of communication by the behavioural outcome of the receiver. However, this is a too simplified judgement. People differ in their beliefs, attitudes and behaviour. These differences are likely to lead to an individual unconverted and unconvinced after their engagement in communication with others, if the source's intention is to persuade the receiver to modify their behaviour. This should not be considered as a communication failure, as an individual can well understand the message from an information sender and still reject the validity of it

(Burgoon et al, 1994). For instance, messages such as “drink-and-drive is dangerous” and “saving energy” are well publicised and well understood in many countries, however, the violation of the drink and drive legislation still occurs, and unnecessary waste of water, careless use of electricity and fossil fuels still occurs in many households. The failure to engender the desired attitudes, beliefs and behaviour is largely caused by the individuality of the participants in the communication process. That is, each person responds to a message differently because they are selective in nature with respect to receiving, perceiving, processing and retaining the message. Such selective nature inevitably inhibits the outcome of communication (Burgoon et al, 1994).

The initial step of effective communication is that the information should be received, perceived and processed cognitively by the message receiver. Cognitively processed information is more likely to be stored in an individual’s cognitive structures to form the base of their knowledge. As discussed in the previous chapter, the changes in attitudes, intentions and behaviour are determined largely by an individual’s knowledge. Therefore, although an individual may not modify their behaviour immediately after their involvement in a communication process, the message they received and processed cognitively will still be stored in their memory. In other words, there is possibility that they will alter their behaviour in the future.

People encounter others and various media regularly. Moreover, information may be received consciously or sub-consciously. This makes communication an on-going process, of which, the beginning and end are difficult to identify (Burgoon et al, 1994). On the other hand, once the process stops, communication no longer exists. That is, if the information sender stops sending information, or the receiver stops receiving information, there is no communication.

Furthermore, communication is a dynamic function, involving exchange and interaction. Communication occurs when both information sender and receiver are present, and it does not stop just because the information has been delivered to the

receiver. There should be a feedback channel between the receiver and the sender, which enables the receiver and sender to influence one another in order to achieve their goal of the communication. Therefore, communicating with others helps an individual to modify and develop their knowledge base continuously. Subsequently, people may constantly alter their belief, attitudes and behaviour, and this can help them to adapt to the changing world.

In the context of tourism and visitor management, communication between visitors and destination personnel is critical. Moscardo (1999) argues that interpretation and communication can be responsible for achieving the sustainable use of tourism resources. Moscardo (1999) suggests that many visitors would know more about their bond to the environment, their history and culture while participating in recreational activities. Therefore, the information they receive in destinations is likely to increase their understanding of the site, which, in turn, may result in increased awareness and knowledge. An individual's knowledge of a specific issue is one of the factors to determine their intentions to engage in particular behaviour (See Chapter Three Figure 3.2, 3.3, 3.7).

Communication serves as the vehicle to deliver the interpretive information of the features of a site to visitors. Interpretation programmes are designed to enhance the quality of visitors' experience, as well as to continue their interests in the activities and features of the site. From the site personnel's point of view, communication with visitors of the visitor management techniques can assist the management of visitor impacts and the protection of tourism resources. Moreover, through communication, information such as opening times, routes to various spots and facilities in the site, applied rules and regulations, and visitor safety concerns, is delivered to visitors. From the viewpoint of visitors, they have the right to inform the site-managing organisations of their likes and dislikes, complaints and appreciation, and, most importantly, any emergency they encounter. This feedback to the site-managing organisations is essential to the managerial improvement of the site. Thus, effective communication

between visitors and site personnel may be considered as the foundation of successful visitor management.

4.1.1 The Characteristics of Communication

Communication is used widely to acquire what an individual needs and wants in their daily life. However, it is not necessarily true that everyone knows how to communicate effectively. The basic requirement of communication is that it is necessary to have some sharing of meanings, for instance, same language, between the information sender and the receiver so they can understand one another. Nonetheless, the use of shared meanings to represent the communication subject can still cause misunderstanding. The reason for communication being a dynamic and on-going process is that, wanting communication to be effective, both the source and the receiver play an equally important role in the process. According to Burgoon et al (1994), there are several characteristics of communication: it is transactional, affective, and personal; it also has instrumental and consummatory functions.

4.1.1.1 The transactional nature of communication

Communication involves both the information sender and the receiver. Therefore, changes in one of the parties in the process are likely to affect the process and the end results of communication. Once communication initiates, it will affect both the source and the receiver, and future messages that will be produced. For example, in a face-to-face communication situation, the information sender will look for the reaction of the receiver when delivering messages to ensure that the messages are received. The receiver's reaction to the messages may be verbal or visual responses, such as greetings, a smile, a yawn, a frown, or an eye movement. These responses from the receiver provide indications for the sender about how the messages are received, for instance, the receiver understands the message, or is puzzled, or is bored, this is the feedback to the message source. In other words, feedback is the transmission of the receiver's reaction back to the sender (Fiske, 1990). Without feedback it is difficult to

assess how effective a communication process is. The source subsequently can act upon the feedback that they received to modify communication techniques and contents to enable the receiver to understand it more effectively. The receiver will then respond to the new messages to demonstrate whether the messages are received and perceived without confusion and difficulty (Burgoon et al, 1994; Fiske, 1990). Hence, each party participates in the process constantly, and all the changes in these elements involved during the communication process have effects on one another. In turn, a new communication event may be created (Burgoon et al, 1994).

The main function of feedback is that it enables a source to adjust their messages to satisfy the needs of the receiver. In addition, it helps the receiver to feel involved in the communication process. Knowing that the communication source is aware of an individual's existence and their responses are taken into account by the communicator makes the individual more willing to communicate, and, may be more susceptible to the message. On the other hand, the lack of availability of feedback to the source may lead to accumulation of frustration of the receiver, which, in turn, may result in communication difficulties or even failure (Fiske, 1990).

4.1.1.2 The affective nature of communication

There will be no communication if there is no information receiver. Thus, when communication occurs, there is an impact on someone (Burgoon et al, 1994). This is related to the transactional character of communication. That is, the interactions between the sender and the receiver, and the feedback from the receiver to the sender, will influence one or all parties in the communication process. Additionally, Burgoon et al (1994) stress that much communication is affective, and is involved with people's feelings and emotions. Often people evaluate communication messages subjectively and respond to them according to how they are affected by the perceived messages. For example, in the case of tourism, if visitors comment to a local resident that their culture and tradition is interesting and fascinating, it is likely to encourage the local person to tell them more about it. On the other hand, if visitors think that the local

food is repulsive or local people are easy to cheat, people in the region may find it offensive and respond to them in a hostile manner. Visitors then may have to alter the topic of their communication if they want to continue their communication with the locals, otherwise the process between visitors and locals is likely to cease. In short, the information receiver's responses can be emotional, and they can determine the direction of future communication. This is the affective character of communication.

4.1.1.3 The personal nature of communication

The purpose of communication is to transmit messages and produce and exchange meanings successfully (Fiske, 1990). People use symbols to communicate, often words, and maybe gestures, behavioural cues and signs. However, since the meaning of a symbol varies according to the perceptions of the receiver, communication is personal and dependent upon who uses it (Burgoon et al, 1994; Johnston, 1994). Moreover, a symbol may have more than one meaning, and, in different situations, to different people, the same symbol may mean different things. For example, the word "hot" can mean weather, temperature, spiciness, and popularity. For an individual from a tropical weather zone, hot weather means 35 degree Celsius and above. For someone from a temperate weather area, 28 degree Celsius may be uncomfortably hot. The word "holiday", to some people means spending time with family or friends, i.e. quiet and relaxing. To others, having a holiday means sun, sand, sea, eating, drinking and clubbing until the early hours. Using tourism as an example, Western visitors may find it odd when being asked to take their shoes off when entering a local's house in many Asian countries, since this is not a common practice in their home countries. However, to Asian people, taking shoes off before entering someone's house is caring because the dust from outside will not be brought in to dirty the house. Thus, communication may not be successful when the parties involved in it use and interpret the symbols differently. This is especially the case when the two sides are from different cultural backgrounds, even though they may use the same language to communicate.

It is difficult to separate self from the communication process because people's attitudes, beliefs, experiences and emotions are involved in it, and will influence the way they send and interpret messages. Moreover, the meanings of symbols may vary according to the time, people, and situation. For instance, nodding one's head usually means "yes" to most people, however, in Bulgaria, it means "no", instead, shaking the head means "yes". In the case of tourism, it is fairly common that when visitors first go to an unfamiliar country they misinterpret the communication messages they receive. Therefore, a mutually shared meaning/s of symbols is necessary for people to understand one another. Moreover, back to the transaction nature of communication, through the feedback channel, confusion and misunderstanding can be minimised.

4.1.1.4 The instrumental function of communication

Communication can be seen as an instrument through which people may acquire control over their environment. For example, a student uses communication to convince their lecturer that the due date of a required assignment is too soon. A visitor in an unfamiliar destination may use communication to gain information about where the nearest bed and breakfast is, and what is special in the local area. A tourism destination manager uses communication to inform visitors of the opening times of an attraction, regulations on the site, and the routes to take to various sites. Hence, communication is the tool that enables people to gain information, to entertain, to console, and to inform others. For instance, an individual tells amusing stories to cheer someone up. Moreover, persuading others to gain compliance is one important function of communication. When one attempts to persuade others to change their attitudes, beliefs and behaviour, communication is the instrument of the persuasion attempt.

4.1.1.5 The consummatory function of communication

Burgoon et al (1994, p. 17) define the consummatory function of communication as "any communication activity that has the goal of satisfying the communicator without

any necessary intent to affect anyone else”. People engage in conversation because they enjoy talking to others. The communicated messages may not be true, however, because communicators are satisfied when talking about and exchanging such information, communication then occurs. Although previously mentioned that communication has an impact on all elements in the communication process, as it is affective, the difference between the affective character and consummatory function of communication is the intention to affect. In other words, the consummatory function of communication suggests that communication does not necessarily have the intention to create impacts on others. For example, if people express their feelings towards an issue, say, the rise in the price of petrol, the source has no intention to influence the message receiver but just to express what they feel. The receiver may or may not agree with their feelings. In turn, the communication may develop further and may alter its direction, for instance, towards other government policies.

In the case of the soft strategies of visitor management, in a national park wherein an animal species is endangered, the interpreter or other interpretive materials may just express the situation of the wildlife without any intention to modify visitors’ attitudes and behaviour toward the animal. Some visitors who receive the messages may act upon it proactively, for instance, lobbying for government funding to carry out research and protection of the animal. On the other hand, some may just leave the site with a little more knowledge that a particular species is near extinct.

4.1.2 Communication Context

The most frequent method of categorising communication contexts is by using the size of the communication group: interpersonal, small group, organisational, public speaking, and mass communication (Carr, 1991; Johnston, 1994). The differences between these communication contexts include the formality of communication rules, the opportunity for direct feedback, the relationship between source and receiver, the goals of communication, and the number of people involved in the communication activity (Burgoon, 1994; Johnston, 1994). These various types of communication

occur in different situations. All these communication categories are important from the point of view of communication within the tourism context.

4.1.2.1 Interpersonal communication

Interpersonal communication happens in face-to-face conversation between two or more people. That is, the number of people engaged in the conversation is relatively small. In interpersonal communication, feedback from the receiver is more direct than in the other categories of communication. Also, the interactions between the source and the receiver are higher, more dynamic and more personal. This type of communication is usually informal and personal, such as conversations between two or more friends.

4.1.2.2 Group communication

In small group communication, the formality may be low or high, dependent upon the character of the group and the relationship between the group members. The feedback tends to be moderate in small group communication. It is face-to-face communication among three or more people who constitute a social group, and is characterised by shared norms and particular purposes, such as project group at work or at school, activity club, or small-guided tours (Johnston, 1994). Small group communication is more objective and impersonal in nature compared to interpersonal communication, especially on occasions when problem solving, decision-making, and task completion are the goals of communication (Carr, 1991).

Another group communication is termed organisational communication, which occurs in larger groups, such as a corporation. Communication in organisations is usually for delivering rules, regulations, roles, and culture to the members, and includes induction programmes designed for newcomers.

4.1.2.3 Public speaking

Public speaking is formal communication with an audience group. Members in the audience group may influence one another, therefore, they may have a strong impact on the acceptance of the message. For example, in a speech from a student union representative election, it may be less likely that an individual would think the speech is successful if other people around them respond unfavourably to it. In public speaking, the feedback from the audiences is low, and their relationships with the source are impersonal. In this type of communication, a topic is selected in advance, and the source is often a specialist in the field. Some researchers suggest that in public communication, the source should maintain identification with the audiences and ensure that the audiences remain empathetic. If the source loses identification, it is possible that audiences may identify with one another and gather to oppose the source (Cronkhite and Liska, 1980).

4.1.2.4 Mass communication

Communicating to a large and diverse audience with no interaction or immediate feedback is “mass communication”, which usually relies on a medium or media, such as newspaper, television, radio, journals, and magazines, to deliver messages. In fact, mass communication has profound effects on people’s daily life.

The table below shows the various types of communication context (See Table 4.1).

Table 4. 1: Contexts of Communication.

Context	Formality	Feedback	Relationship	Number of people
Interpersonal	Low	High	Personal	Few
Small group	Low or high	Moderate	Defined by group	Three or more
Organisational	High	Moderate to low	Defined by status	Many
Public	High	Low	Impersonal	Many
Mass media	Varies	Low	Impersonal	Many

Source: Johnston, 1994.

4.2 COMMUNICATION PROCESS

As discussed earlier, communication is a dynamic process. It is transactional and will affect both the information sender and receiver. It is also personal since the messages are sent and interpreted based on each individual's perception of the messages. In addition, it is necessary to use a code or codes that both parties share and understand in order to transmit and interpret the messages. Moreover, communication can be produced intentionally or unintentionally, and the responses to it may be intentional or unintentional. These elements comprise the process of communication. However, there are disagreements on the factor of communication intention. Miller and Steinberg (1975, p. 35) argue that if there is no intention, then communication does not exist. Their opinion is that "... at least one of the parties transmits a message to another with the purpose of modifying the other's behaviour (such as getting him to do or not to do something or to believe or not to believe something). By our definition, intent to communicate and intent to influence are synonymous. If there is no intent, there is no message". This concept is believed to be too strict as they view communication activities as instrumental and persuasive in nature (Burgoon et al, 1994). The relationship between, and the outcome of, communication and its intention may be explained more clearly in the matrix developed by Burgoon et al (1994, See Figure 4.1).

	Source has an intent to communicate	Source does not have an intent to communicate
Receiver perceives an intent to communicate	A. Communication	B. Ascribed communication
Receiver does not perceive an intent to communicate	C. Communication attempts	D. Behaviour

Figure 4. 1: Communication and intention matrix.

Source: Burgoon et al, 1994.

In Cell A, there is no difficulty in identifying that communication occurs. In Cell D, neither the information sender nor the receiver has the intent to communicate; there

will be no communication even though some behaviour occurred. For instance, an individual passes someone on the street and does not have any intention to communicate, nor does the person perceive that the individual intended to communicate. The individual carries on walking, something happened, but there is no shared meaning to communicate to either party.

Cell B illustrates that the receiver perceives an intention from the sender to communicate, although the sender has no such intent. This situation in fact occurs quite commonly as people ascribe meaning to symbols. This will cause misunderstanding and will affect future communication. For example, an individual performs non-verbal behaviour, say, standing in the middle of a forest land. A park ranger or other visitors passing by may wonder if this individual has lost his way, or has lost something in the forest, and offers their help. However, this individual may be just enjoying a quiet moment in the forest.

The situation in Cell C is also often seen and can be problematic, too. An attempt to communicate is made, but the supposed receiver fails to recognise and understand the attempt. As mentioned earlier, if there is no receiver, there is no communication. Hence, in Cells A, B and C, it is worth researching into various communication strategies to ensure that communication occurs effectively and accurately.

4.2.1 Models of the Communication Process

There are various contexts of communication, and the degree of involvement between the receiver and the source, as well as feedback, varies, according to the types of communication. Hence, it is difficult to use a single model to illustrate the communication process. One model may be sufficient for research into a particular function or type of communication, but may be less than adequate in other communication contexts. Nevertheless, in all communication models there are common basic elements such as source, messages, receiver, and channel. In this

section, three models of communication will be examined: the Shannon-Weaver Model, the SMCR Model, and the Westley-MacLean Model.

4.2.1.1 Shannon-Weaver model of communication

There are several models of the communication process focusing on how information is passed from one point to another. Probably the best known model is that developed by Shannon and Weaver (1949). The basic concern of their model is accurate message transmission (See Figure 4.2). In the model, there is a source who encodes or creates messages and transmits them through a channel to a receiver, who then decodes or recreates the messages. The importance of this model is the introduction of the “noise” concept. Noise is defined as any additional and unwanted stimuli which can disrupt the accuracy of message transmissions. Since Shannon was an engineer at Bell Telephone, the notion of “noise” originally indicated stimuli such as the static interference on a phone line or background loud noise.

This concept of noise is then further extended to include psychological as well as physical noise. Psychological noise refers to an individual’s emotions, feelings and thoughts, which may interrupt the accurate reception of a message. Referring to the affective nature of communication, the source encodes the messages based on their own personal emotions and thoughts. On the other hand, the receiver decodes the message based on their own feelings and mind. Thus, the function of psychological noise may result in two different messages. For example, a student cannot concentrate on the lecturer if the chair is not comfortable. If the lecturer suffers from a bad cold and sore throat they may not be able to deliver the lecture well. The chair and the cold are the noises. Or, a visitor cannot wait to leave a guided walk to go to a café, because they are tired, hungry, or the weather is bad, or, they find it difficult to understand their interpreter’s accent. All these elements can be seen as noise, since they disturb the ability of the communication source and the receiver to encode and decode messages accurately (Burgoon et al, 1994; Fiske, 1990).

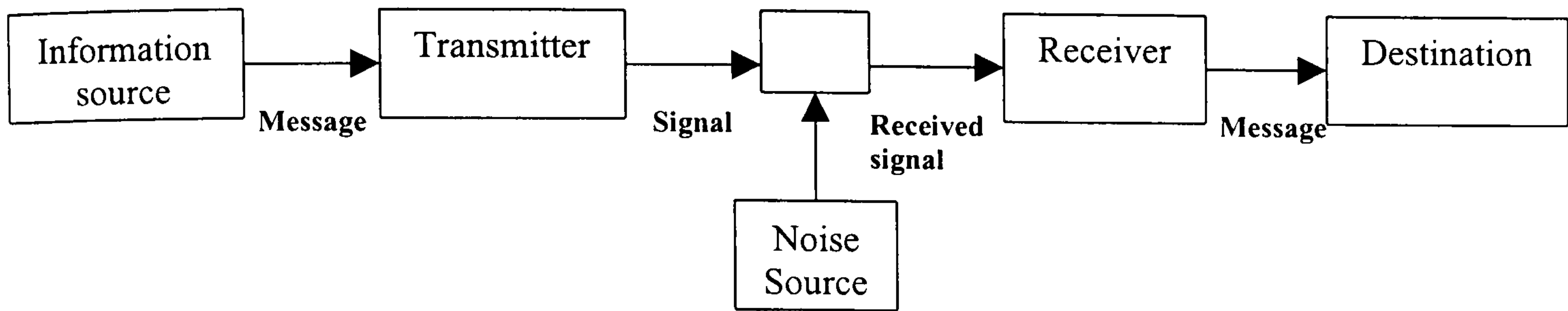


Figure 4. 2: The Shannon-Weaver Model of Communication Process.

Source: Fiske, 1990.

However, Shannon-Weaver's model of communication is a one-way process. Referring to the transaction nature of communication, there is difficulty in its application. According to Burgoon et al (1994), even adding feedback from receiver to source, this model still neglects the transactive and simultaneous nature of communication. Shannon-Weaver Model of communication fails to demonstrate attributes of the source, receiver, message and channel, because it does not take the transactional nature of communication into account. As discussed previously, these elements can alter the process of communication. Moreover, this model does not indicate other contexts where communication can take place but only the process of two people communication. Thus, in group and mass communication, this model may not apply.

4.2.1.2 The SMCR model

Similar to the Shannon-Weaver model of communication, Berlo (1960) proposes a linear concept of communication, which emphasises how the attributes of the four main elements, namely source, message, channel and receiver, and how these elements affect communication. The source, according to Berlo (1960), is the creator of the message. The message is the translation of ideas into symbolic code; the channel is the medium/media which carry and deliver the message to the receiver. The receiver is the person or people who are the target of the communication.

Berlo (1960) also stresses the need for encoders and decoders in the communication process. The encoder is responsible for expressing the source's idea. In the situation of face-to-face communication, the encoder can be the source themselves, such as their voice, behaviour cues and gestures. However, the encoder can also be other facilities or people, such as text or language interpreter, that helped in the encoding and message production. On the other hand, the decoder can be the receiver's sensory skills such as hearing, smelling, tasting and seeing. In other situations, decoders may not be the intended receivers. For example, government agencies may assess and decode the messages prior to passing them to the receiver. In addition, Berlo (1960) admits that personal factors such as communication skills, attitudes, knowledge, and cultural environment will affect both the source and the receiver's encoding and decoding process.

The drawback of Berlo's (1960) concept of communication is that his concept of the communication process is still linear, and lacks the consideration of feedback and simultaneous behaviour and responses between the source and the receiver. Hence, although he recognises the effects of the source and receiver's personal factors, his model is unlikely to account fully for the dynamic process of communication.

Johnston proposed a model of communication process that integrated both Berlo and Carroll's concept (1953, in Johnston, 1994, See Figure 4.3).

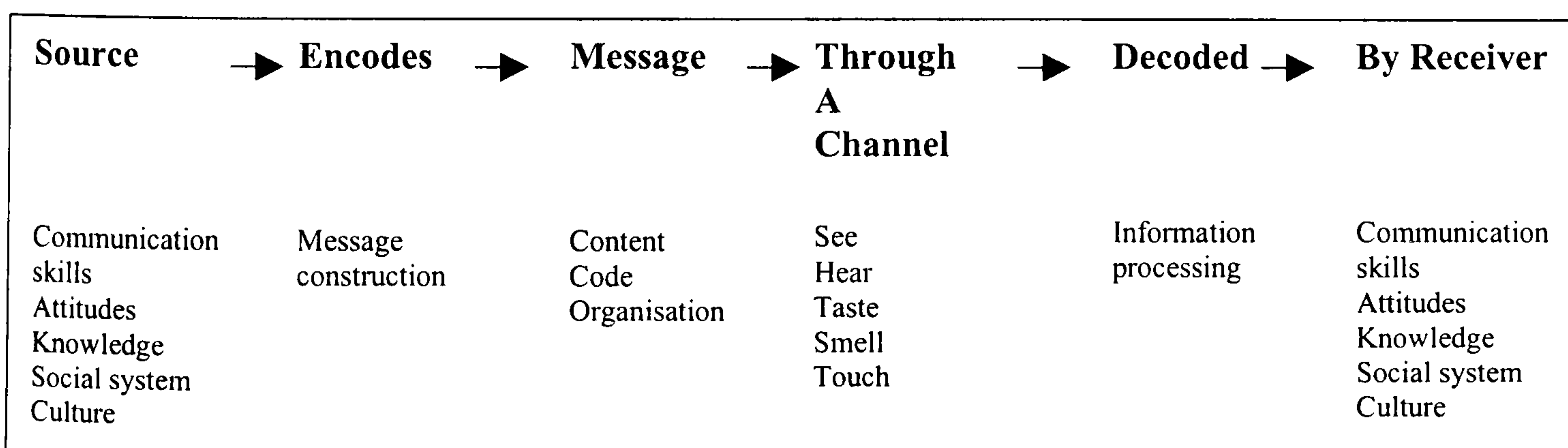


Figure 4. 3: Johnston's communication model.

Source: Johnston, 1994.

In Johnston's model, the source encodes a message through a channel, and the receiver decodes the message. Akin to the above two linear-concept communication models, Johnston's model also focuses on the transmission of the message. It is worth noting that both Berlo's (1960) concept and Johnston's (1994) model stress the characteristics of the sender and the receiver, both of which, would influence the process of encoding and decoding the message content and organisation, as well as the information processing.

4.2.1.3 The Westley-MacLean model

Westley and MacLean (1957) developed a more comprehensive communication model, which covers both face-to-face and mass communication activities. This model integrates feedback as part of both communication processes. Their concept of the distinction between interpersonal and mass communication depends primarily on the differences in feedback. In interpersonal and small group communication, the feedback is immediate from the receiver directly to the source. There are various stimuli in the face-to-face communication process, which allows the source to learn about the receiver instantly and directly. However, in mass communication, the messages may be delivered to the receiver successfully, nonetheless, from the receivers' point of view, their feedback to the message sender is unlikely to be heard and seen until some time later.

In the Westley-Maclean Model, for face-to-face communication, there are five elements: objects of orientation, a message, a source, a receiver, and feedback. The source (A) focuses on a specific object in the environment (X) and creates a message (X') which is transmitted to a receiver (B). The receiver then responds to the message and sends feedback (f_{BA}) to the source (See Figure 4.4).

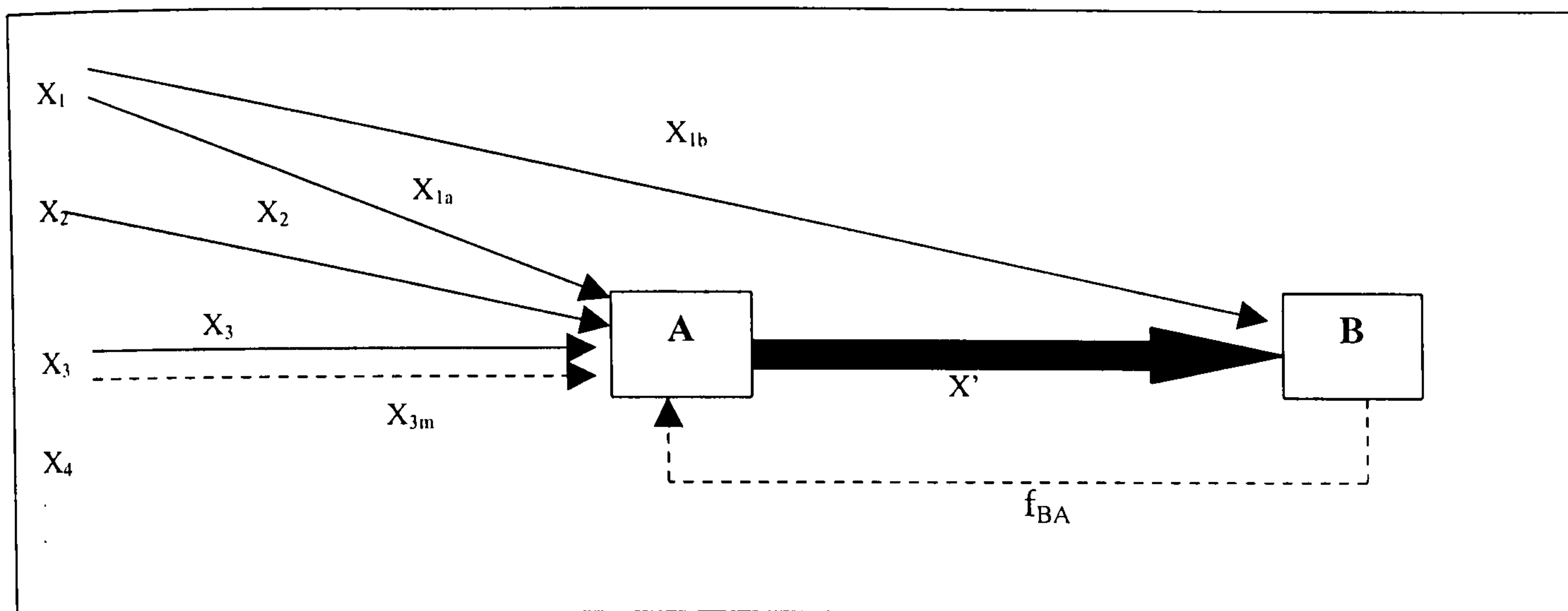


Figure 4. 4: The Westley-MacLean Model for face-to-face communication.

Source: Burgoon et al, 1994; Fiske, 1990.

In the mass communication event, there is another element C added. C is a gatekeeper or opinion leader who receives the message (X') from the sources of mass media (A) or focuses on objects in the environment (X_3, X_4). The gatekeeper uses the information to create messages of their own (X''), which is transmitted to the receiver (B). In other words, the gatekeeper filters and selects the original information prior to its delivery to the receiver. The gatekeeper may be a professional interpreter who translates messages from a language to another to enable receivers to receive the message. In so doing, the gatekeeper provides the receiver with an extended environment which was unnoticed before. Westley and MacLean (1957) suggest that the feedback channels in the mass communication are of three types: from the receiver to the gatekeeper, from the receiver to the mass media, and from the gatekeeper to the mass media (See Figure 4.5). This model covers the similarities and differences between interpersonal and mass communication, feedback channel, and the importance of the gatekeeper in a mass communication event.

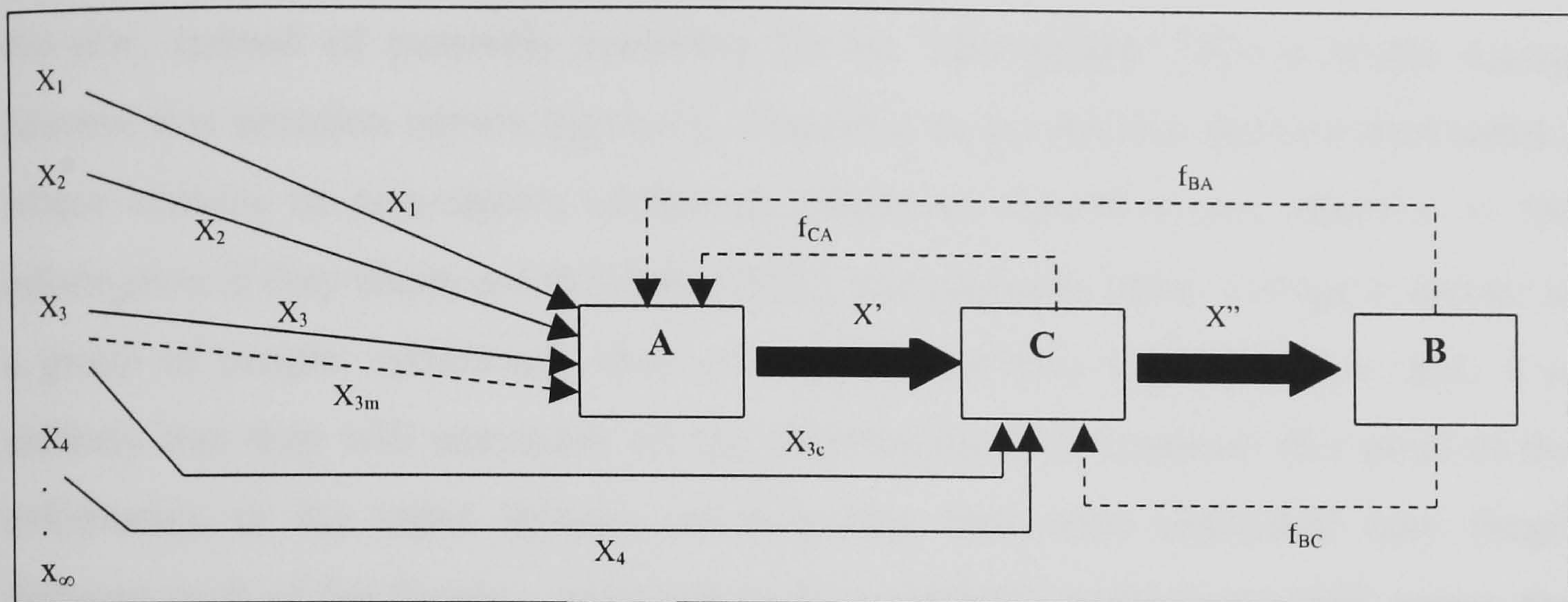


Figure 4. 5: Westley-MacLean Model for mass communication.

Source: Burgoon et al, 1994; Fiske, 1990.

In the case of environmental interpretation in the context of soft visitor management strategies, Moscardo (1999) suggests a basic model of communication (See Figure 4.6).

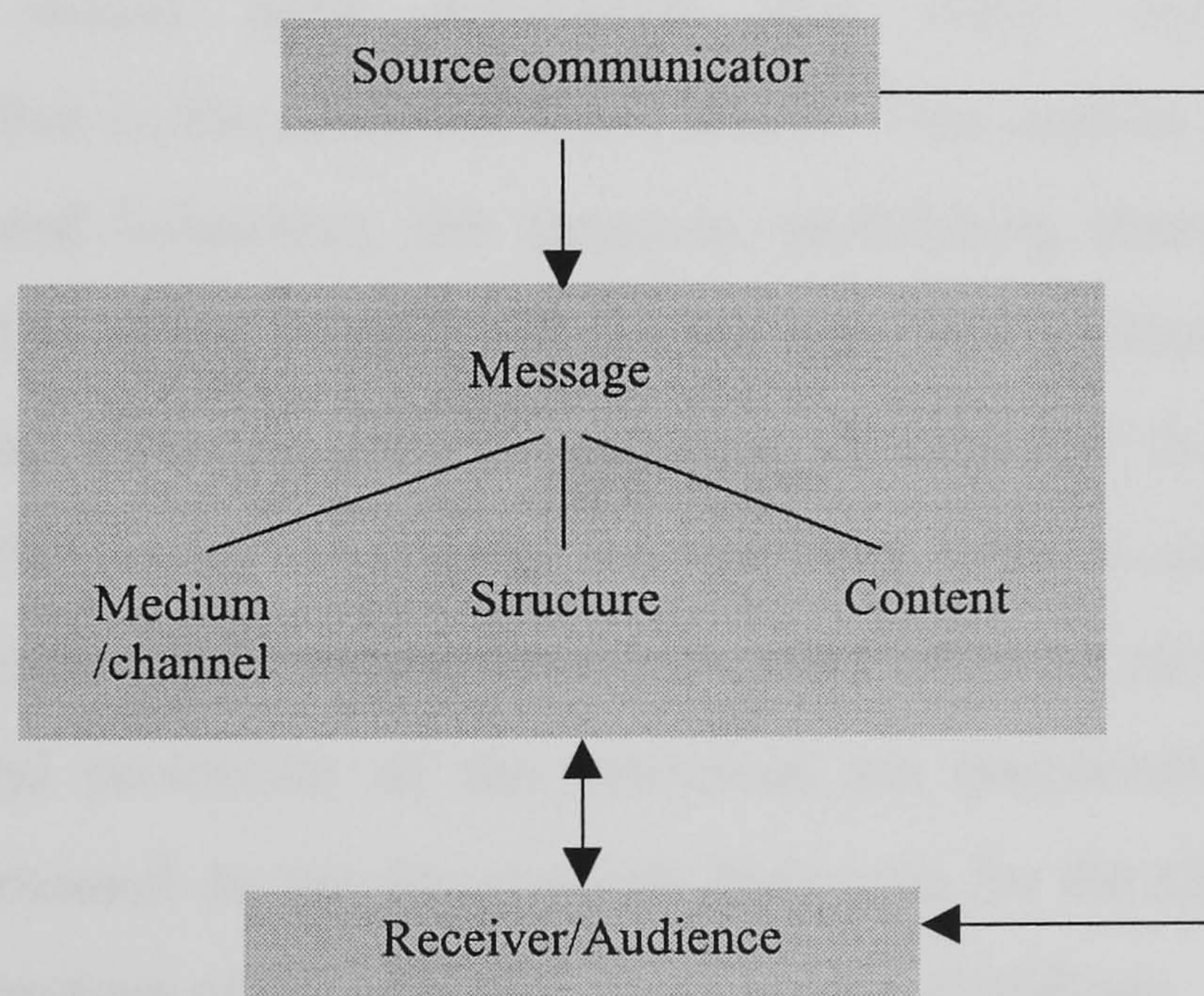


Figure 4. 6: The basic communication model.

Source: Moscardo, 1999.

Moscardo (1999) indicates that the process of communication involves two-way interactions between the receiver and communicated messages. The receiver can actively choose whether to pay attention to a specific part of the message and ignore

the rest, instead of passively receiving all the information. This is worth noting because this situation occurs regularly, especially in the outdoor tourism destinations where visitors, as non-captive audiences, cannot be forced to pay attention to the information if they chose not to (Ham, 1992). For example, video footage is shown to a group of people. Afterwards they are asked what they can remember, and, it is unlikely that they will remember all the information. It is common that parts of the information in the video footage are forgotten, and, each individual may forget different parts of the footage. Although each individual's memorising skill varies, the selective receiving of information is unlikely to be the result of memory. Instead, it is more related to the influences of an individual's physiological differences, past experiences, cognitive structures, interests and knowledge (Burgoon et al, 1994).

Moreover, Moscardo (1999) argues that the information source can have a direct influence on the receiver instead of having to rely on other medium/media to deliver the message. With respect to environmental interpretation, visitors who participate in guided activities would have substantial and direct contact with their guides/interpreters, that is, the communication source. This enables the guide to affect visitors' activities and behaviour, for example, prohibiting them from entering a wildlife sanctuary. The direct contact with guides may also facilitate visitors' further understanding of and affection for the resources of a site if the interpreter/guide communicates sensibly and persuasively. Furthermore, visitors can learn from their observation of the guide and other site personnel. Staff attitudes and behaviour toward the management and protection of the resources are perceivable communication messages. If site personnel do not demonstrate their care for the site, it is unlikely to communicate the messages of site protection and visitor guidelines.

On the other hand, the source can be the tourism resources themselves. The beauty and uniqueness of these features are usually the focus of visitor interests. Exposure to the features such as closer encounter with wildlife and landscape is suggested to have a profound impact on visitors by many tourism researchers (Pearce, 1988, in Alcock, 1991; Tilden, 1977). This principle confirms what Tilden (1977) stresses as the need

to use original objects in interpretation. However, the direct contact with the source may not necessarily be the most sufficient way of interpretation, nor a better visitor management and resource protection strategy. In some sites or areas where wild flora and fauna may be dangerous to visitor safety, the direct contact with the features needs further consideration. Visitor safety and the protection and conservation of the resources should not be neglected. In such instance, hard visitor management techniques are used to immediately achieve the objectives of resource protection, and they also rely on communication with visitors to get the messages across.

The communication process in the context of environmental interpretation of soft visitor management techniques is similar to the face-to-face or the small group communication. Visitors decode and process the messages from the source communicator, such as a guide, the tourism resources, or the locals, into a meaningful and understandable form. In some situations the notion of direct contact with sources may be referred to as observational learning. The source, say, the local community, consciously or unconsciously sends messages directly to visitors without any other form of medium. From observation, visitors process what they receive and may act upon it. Visitors' responses to the locals will lead to another communication activity. This is the transactional nature of communication.

The disadvantage of Moscardo's (1999) model is that it fails to indicate the feedback, or response, from the receiver directly to the source. In tourism destinations, the contact between visitors and local communities can be dynamic and constant. After the encounter with tourism resources and locals, visitors may respond with positive attitudes and behaviour, as well as enhanced understanding of and respect towards the local society, the resources, and the management and protection of the resources.

4.3 COMMUNICATION IN THE CONTEXT OF VISITOR MANAGEMENT

Communication is an essential tool in successful visitor management. It delivers information with respect to both hard and soft visitor management techniques to

visitors, and it also has entertaining and persuasive functions. The entertaining function of communication helps to enhance visitors' enjoyment and the persuasive function aims to modify visitors' behaviour to be more appropriate. After all, the majority of the visitors come to the site to experience the features and subsequently, may expect to get closer to resources that are sensitive. The balance between resource protection and visitor satisfaction and enjoyment needs to be carefully managed. Using site personnel, media, or the resources themselves to communicate with visitors, to inform, entertain and persuade them to achieve the management goals is considered an effective management strategy. In this section, these three functions of communication within the tourism and visitor management context will be discussed.

4.3.1 The Informing Function of Communication

The informing function is considered to be a service to visitors and an essential component of successful visitor management. It provides a warm and pleasant welcome to visitors and distributes the required information about the site, including the applied regulations and restrictions. It also portrays the image of the site-managing organisation through the staff's appearance and manner, as well as the presentation and contents of the informing messages (Cooper, 1991; Sharpe and Hodgson, 1982). For instance, well-trained, uniformed staff who welcomes visitors promptly and responds to their queries clearly and extensively shows the professionalism of site-managing agencies.

Nonetheless, the type of communication between visitors and site personnel is difficult to define: is it interpersonal, small group, or mass media communication. In fact, it can be a mix of the various contexts of communication. For instance, often visitors obtain information from signage, labels, displays, information boards, publications, and other fellow visitors. Also, visitors may approach, or be approached by site personnel and get the required information. Furthermore, they may participate in guided walks or talks to receive more information. The use of diverse media in tourism destinations might be because of the nature of tourism: the difficulty of employing large number of

staff, the difficulty of staffing during off peak hours, the spread of visitor flows and the reality that some visitors just do not want to receive information from site personnel but from other forms of media. Hence, interpreters and site personnel present and deliver messages personally and directly to visitors where possible, and visitors are also able to interact with them. On other occasions, messages are communicated through media and the interactions between visitors and the source may be limited.

It was stressed previously that the feedback from receivers to the source and the interactions between the source and receivers are essential to assess how the messages are transmitted. Therefore, besides traditional visitor information media such as signage, labels, displays, printed materials, audio-visual shows, which channel information to the visitors (i.e., one-way communication), many site-managing organisations develop other means to communicate with visitors. For example, hands-on displays, experiments and quizzes are often seen and are usually welcomed by visitors, especially children (Sharpe, 1982b). The development of computer technology also enhances communication strategies. Visitors can skip pages and look for the needed information from the screen. Information ranges from opening hours, route maps, specials in the site to educational interpretation programmes. Some allow visitors to comment on particular issues. In Beddgelert, North Wales, the computerised programme in the National Trust property Llywelyn Cottage is introduced by the famous Welsh actor Anthony Hopkins, using both English and Welsh.

The use of quiz, hands-on displays, and visitor comments can increase interactions between visitors and message media, although the interactions are still limited and the site-managing agencies are less likely to respond to the feedback promptly. Moreover, by using a real person or cartoon characters in computerised programmes, site-managing organisations may be able to minimise the perceived coldness and user-unfriendliness of computers by some visitors. It may also be entertaining and credible, especially when the programme features a well-known person.

The informing function of communication is to deliver messages to visitors. Although the messages may be amusing or persuasive, the main purpose is to give visitors the information they want. Frequently asked questions include the location of facilities, the directions to particular spots, accommodation availability and booking, what to see and do. Other information related to visitors' activities in a site include applied regulations and restrictions upon certain behaviour and activities, charges for facilities and entrances, and the interpretation of features in the site. Visitors need to be informed with such information to help them carry out their activities in a site safely, comfortably and satisfyingly. Furthermore, informing visitors with the applied regulations indicates undesired behaviour and activities to visitors, which helps the site-managing agencies with respect to the management of the destination.

It is difficult to identify the best medium to conduct the informing function, as every destination is unique and there are limitations when it comes to implementation, operation and maintenance. For example, the construction of tourist information centres is not appropriate in resource sensitive areas because they will need to provide facilities such as toilets. Increased visitor numbers to the information centre, sewerage and water pipe, electricity cable, and the building itself may have impacts on the neighbouring resources and the aesthetic value of the site. Furthermore, the erection of sign posts and information boards also require regular maintenance to repair vandalism and wear and tear. A broken or faded signpost certainly does not perform well the informing function. This raises the question of maintenance, otherwise a negative image of the destination might be transmitted. Printed material such as leaflets is often used to deliver directorial and interpretive information, which has its disadvantages, as leaflets may end up on the ground. Publications such as guidebooks may be too bulky to carry when visitors set out trekking. Also, they require storage and most importantly, they need updating. Audio-visual shows such as video programmes require hardware facilities, and they also need updating. Last but not least, computers tend to be installed indoors and the cost of operation and maintenance is high (Ham, 1992; Sharpe, 1982).

One may argue that since these various communication media cannot achieve the goal of informing visitors, the solution should be to employ more staff. However, interpersonal communication might not always be the best way to transmit information to visitors. There is an argument that the most effective way to inform visitors is by face-to-face communication, as this allows immediate feedback and prompt responses to the feedback between visitors and site staff to reach a satisfactory exchange of messages (Sharpe, 1982b). Nonetheless, it is unlikely that site staff will be able to attend to all of the visitors at all times, and visitors may not be willing to queue and wait for attention when the site personnel are unavailable. Moreover, even if site-managing organisations attempt to do so, the expenditure on staff training and salary is unlikely to be cost effective.

The criteria for selecting personal or other forms of media depend upon the availability of budget and human resources, characters and types of messages, and the character of the site. Directorial and administrative information such as opening hours and directions can be delivered by signs and brochures or leaflets. More detailed information about the features in an area and directions can be delivered by guidebooks, ordinance survey maps, personnel, guided activities, indoor and outdoor displays, and video programmes. In sites, which are potentially dangerous to visitors or highly sensitive such as volcanic areas, wildlife breeding grounds, and unstable landscapes, messages with respect to visitor safety, and information about the features can be included in printed materials, signage, exhibitions/displays and audio-visual programmes. Video programmes might be a good communication medium when there is difficulty in allowing visitors to get close to the actual objects. It is suggested that where possible, the better way to inform visitors of the values of the resources is to let them experience the resources, subject to the condition that appropriate visitor protection and resource conservation strategies are functioning (Moscardo, 1999; Tilden, 1977). Hence, there is no conclusive answer as to what media are best to conduct the informing duty in a destination, although a mix of personal and various non-personal media is likely to be more efficient.

4.3.2 The Entertaining Function of Communication

Entertaining is not the main function of communication, nor the main concern of visitor management. However, the rule of thumb is that if receivers are not interested in the communication, the communication process is unlikely to continue. Especially in tourism destinations, visitors are there to enjoy their leisure time. If the information, especially in the case of interpretive activities, does not interest them, they will not pay much attention to it. The entertaining function of communication does not necessarily imply that it has to be “funny” in the sense that receivers are made to laugh out loud. In fact, it aims to enhance the receivers’ enjoyment and to prolong their interest in being involved in the communication process. As discussed earlier, an individual engages in communication to acquire control over their environment, such as obtaining information from, or conveying messages to, others, and achieving a shared meaning. People also communicate just because they enjoy it. Communication provides opportunities to an individual to interact with others, which, is believed to help an individual to achieve personal identity (Carr, 1991). The enjoyment and satisfaction an individual perceives in communication with others is seen as the entertaining function of communication.

In the example of environmental interpretation of soft visitor management strategies, it is essential to ensure that visitors are interested in the messages when communicating with them. In spite of the form of medium used to deliver a message to visitors, whether it is for informing or persuasive purposes, if visitors are not attracted to the message, or the message does not satisfy their needs, the communication is unlikely to initiate (Ham, 1992; Tilden, 1977). Furthermore, the availability of feedback also contributes positively to the entertaining function of communication. If visitors know that site-managing organisations are aware of them and care about them through the responses from the site personnel to their feedback, it is likely to increase their visit experience.

In research carried out by Alt and Shaw (1984) in the Hall of Human Biology at the British Museum of Natural History about visitors' perceptions of ideal museum exhibitions, the findings show that the most important characteristic attributes to the welcomed exhibitions is that it arouses viewers' interest in the subject (See Table 4.2). Referring to the previous discussion on the importance of feedback, and the use of hands-on display and computer touch screen to communicate with visitors, Alt and Shaw's research also stresses that involving visitors in an exhibition is also a critical component in ideal museum displays. Other research includes the study of Discovery Corners in the National Museum of History and Technology, which also indicates that the opportunity to touch displayed objects is welcomed by visitors (Wolf et al, 1979).

Table 4. 2: Ten most important characteristics of an ideal exhibition in order from the most to the least important.

The 10 most important characteristics of an ideal exhibition

- It arouses interest in the subject
 - The information is clearly presented
 - It teaches something new
 - You cannot help noticing it
 - It gets the message across quickly
 - It involves the visitor
 - The visitor can take it at their own pace
 - It is a memorable exhibition
 - It respects the intelligence of the visitor
 - It uses familiar things or experiences to make the point
-

Source: Alt and Shaw, 1984.

The entertaining function can support the informing function when communicating with visitors. Since visitors find the messages interesting and satisfying, they are likely to pay more attention to the content. Thus, the informing duty is achieved. However, it is not adequate to judge the effectiveness of the informing function merely by whether visitors remember the information. The memorising ability varies and concerns an individual's knowledge base, beliefs, attitudes, and cognitive structures. It will be

more appropriate to assess if visitors understand the messages. Referring to Table 4.2, visitors would much prefer information which is presented clearly as messages are delivered more efficiently when the presentation is unambiguous. It requires less effort to look for information when it is presented in order, thus, visitors feel less frustrated.

Moreover, the entertaining elements have the function of enabling the retention and/or regaining of visitors' mindfulness status. Referring to Chapter Two and Three, the visitors' state of mind is critical to their reception and process of messages. The provision of interesting and entertaining information to visitors will help visitors to stay alert and be motivated to receive and interact with new messages. In turn, messages are transmitted more effectively.

Some messages are aimed at persuading visitors to modify their behaviour to be more environmentally sound, such as prohibition of fires on forest land, and the denial of access to a particular area. Yet again, these messages need to be informed to visitors. Although it may be difficult to make this type of messages entertaining, there are successful examples. The example includes the *spider web sculpture* and giant sign of "CONTAMINACION" to inform visitors of the litter problem in the Manuel Antonio National Park in Costa Rica.

With respect to which is the best medium to perform the entertaining function of communication, there is no definite conclusion; it depends on the available budgets, space, operation, and maintenance. The focus of "entertaining" should be on content and presentation, instead of merely the device used. A simply printed leaflet can include highly informative and entertaining messages. On the other hand, a costly produced audio-visual programme may not live up to visitors' interest and taste. They may be more interested in the messages when they can participate in the communication. Moreover, if the messages are to be received by more than one sense, that is, not only seeing or hearing, but also smelling, touching, and tasting, visitors will be more attentive (Ham, 1992; Moscardo, 1996, 1999; Tilden, 1977).

4.3.3 The Persuasive Function of Communication

The main function of most communication activities is to influence others in order to achieve a goal (Burgoon et al, 1994). Therefore, the power of persuasive communication cannot be underestimated. Persuasion is defined as “a transaction process among two or more persons whereby the management of symbolic meaning reconstructs reality, resulting in a voluntary change in beliefs, attitudes, and/or behaviors” (Johnston, 1994, p. 7). Burgoon et al (1994, p. 177) suggest that persuasion as “a conscious symbolic act intended to form, modify, or strengthen the beliefs, opinions, values, attitudes, and/or behaviors of another or ourselves”. In other words, when an individual sends a message deliberately to affect attitudes, beliefs and behaviour, and succeeds, the other is persuaded. Burgoon et al (1994) stress that one persuades not only others, but also ourselves, for example, an individual gives up smoking because of the mounting evidence relating to the negative impacts of smoking. In the case of visitor management, the provision of interpretation and the application of regulations and restrictions upon undesired behaviour aim to educate visitors about the values and sensitivities of the resources, and the desired activities to carry out. Moreover, such information intends to modify visitors’ insensitivity and inappropriate behaviour (Cooper, 1991; Forestell, 1990; Hungerford and Volk, 1990; McArthur, 1994; Moscardo, 1996, 1998, 1999; Tilden, 1977). In other words, site-managing organisations try to change visitors’ behaviour by communicating persuasive messages.

There are other forms of influences communication functions, such as coercion, brainwashing and mind control. The most distinctive characteristic of persuasion, which differs from other forms of influences, is that the changes resulting from persuasion are voluntary. In contrast, coercion occurs when an individual perceives that they have no other options but to comply with force. As opposed to an individual’s independent thought, brainwashing and mind control refer to an individual being told what they should feel, think, and do (Johnston, 1994).

For persuasion to be effective, there should be changes in attitudes, beliefs or behaviour. Johnston (1994) suggests that there are three types of changes resulting from persuasion: affective (a change in attitudes), cognitive (a change in beliefs), and behaviour. Fishbein and Ajzen (1975) also include the change in behavioural intent as an indication of successful persuasion. Burgoon et al (1994) suggest that persuasion can lead to changes in an individual's opinions, beliefs, or values. These changes in turn will result in changes in their perceptions, affect, cognition, or overt behaviour. Therefore, if there are no changes in an individual's attitudes, beliefs, behavioural intentions, or behaviour, persuasion has not occurred. Again, as discussed in Chapter Three, a change in beliefs and attitudes does not necessarily lead to change in behaviour. On the other hand, behavioural change does not always result from changed attitudes and beliefs.

With respect to visitor management, the most desired outcome of communication with visitors would be changes in their inappropriate behaviour rather than changes in attitudes and beliefs only. Only if behavioural changes occur are tourism resources prevented from further degradation. Often site-managing organisations apply regulations and punishments to "force" behavioural change. In Table 4.3, there is a list of strategies used to persuade others to gain compliance, and some of them are commonly used in tourism destinations to manage visitors' activity.

Table 4. 3: Techniques for persuading others.

TECHNIQUE	EXAMPLE
Promise	If you comply, I will reward you.
Threat	If you do not comply, I will punish you.
Expertise (positive)	If you comply, you will be rewarded in life, in the future.
Expertise (negative)	If you do not comply, you will be punished in life, in the future.
Liking	I will get you into a good mood so that you will comply.
Pre-giving	I will reward you in advance for the behaviour that I expect you to perform.
Aversive stimulation	I will continue to punish you until you comply with my wishes.
Debt	You owe me. I have complied with your requests in the past, so you must comply with mine now.
Moral appeal	You are immoral if you do not comply.
Self-feeling (positive)	You will feel better about yourself if you comply.
Self-feeling (negative)	You will feel bad about yourself if you do not comply.
Altercasting (positive)	A “good” person would comply.
Altercasting (negative)	Only a “bad” person would not comply.
Altruism	I need your compliance very badly, so do it for me.
Esteem (positive)	People you value will think better of you if you comply.
Esteem (negative)	People you value will think worse of you if you do not comply.

Source: Marwell and Schmitt, 1967.

Referring to hard visitor management strategies, the use of fines for inappropriate visitor activities such as animal feeding, speeding in resource sensitive areas, littering and vandalism is the application of the “threat” function in persuasive messages. Visitors are informed of prohibited activities by messages presented in various media. These messages threaten visitors to comply with site-managing agencies by applying fines or bans on entry or stay if they do not follow the rules. Moreover, the charging of higher entrance fees, higher parking fees for private cars, the provision of a park-and-ride scheme, and the installation of on-site transportation, may be seen as a combination of threat, promise, and pre-giving strategies of persuasion, even though the “threat” function is not as strong as in the previous case. If visitors come to the site by public transportation, or use on-site transportation while in the area instead of

driving around in their own cars, they are rewarded with hassle-free and relaxing experience on the site. These persuasive messages do not contain coercion or brainwashing meanings, in other words, visitors are free to choose what suits them best.

Furthermore, various visitor codes use persuasive strategies to ensure visitors' compliance. Using the visitor codes discussed in Chapter Two as examples, in The Himalayan Tourist Code, it uses positive self-feeling and positive self-esteem to persuade visitors to be more aware of the sensitive and scarce resources in the region. In the Code, it says that "by following these simple guidelines, you can help preserve the unique environment and ancient cultures of the Himalayas". This message makes visitors feel in a positive way that they are helping the protection of the local environment and communities. In turn, their experience of visiting Himalaya region is not only pursuing one's personal physical limits and adventurous activity, but also with a sense of responsibility fulfilment. Other visitor codes cited in Chapter Two also feature the self-feeling and self-esteem appeal to persuade visitors to adopt more appropriate behaviour and activity by informing them that their care of the environment of the site is important to the resource protection and is appreciated by the managing organisations.

In addition to the self-feeling and esteem appeal, these codes also use moral appeal, positive and negative expertise, promise, and threat strategies to persuade visitors. For example, visitors' knowledge or guilt feelings may be stimulated when they realise that if they light a fire without consideration, the outcome may be a burnt out forest land, which, is a huge, long-term loss for other people. Thus, it is also a threat that if they are not careful, they will be punished by the loss of an area for recreational activities, the loss of good quality air and water, and the loss of many flora and fauna species. By following these guidelines, on the other hand, they will be promised with recreational opportunities, clean air and water, and a preserved environment.

4.4 FACTORS INFLUENCE THE EFFECTIVENESS OF PERSUASIVE COMMUNICATION

Persuasive communication is purposive and goal oriented. In other words, when an individual sends persuasive messages to a receiver, the individual expects to gain compliance from the receiver. This implies that the source and the receiver's variables will affect the effectiveness of persuasive communication. For instance, whether the source is perceived as trustworthy and the receiver's demographic factors will influence the receiver's response to the message (Burgoon et al, 1994; Johnston, 1994).

The persuader employs various strategies (presented in Table 4.3) to achieve the goal of communication. The strategy choice is not arbitrary but dependent upon the goal of persuasion, such as, attitudinal change or overt behavioural modification. In fact, the application of various strategies to persuade is also affected by the source variables. For example, it is possible that a source cannot use the "expertise" technique to persuade receivers because the source lacks expertise credibility. On the other hand, it is possible that a message receiver complies with the persuader not because they want to be rewarded or they fear punishment, but because they "like" the persuader. This "like-the-persuader" is not an unusual reason for an individual to accept and believe persuasive messages. The use of a persuader's charisma to gain compliance is seen when celebrities are invited to communicate the persuasive message. The downside of this persuasion strategy is that in time when the celebrity is no longer popular, it is unlikely to maintain the effectiveness of persuasion.

In this section, the variables that influence the effectiveness of persuasion will be discussed and illustrated by examples. Since the research is into persuasive communication in the context of visitor management, the examples used will be related to the management of tourism and visitors.

4.4.1 Source Variables

Source variables influence the effectiveness of persuasion significantly. Some people are more effective in communication than others because of their character or charisma. However, this does not explain what contributes to successful persuasion. For example, when asking two individuals to persuade a third person using the same verbal language and the same message content, one will be more efficient than the other. Aristotle suggests that ethos, the credibility of the persuader, is a critical characteristics in successful persuasive communication (Burgoon et al, 1994; Johnston, 1994). Yet it is difficult to define “source credibility” as perceived by the message receiver. According to Burgoon et al (1994, p. 38), “the receiver must confer credibility on a speaker, or it does not exist”. Hence, when an individual communicates with two people, these two may have different perceptions of and respond differently to the communicator. Their perceptions are partly affected by their previous experience. Therefore, knowing how receivers perceive source credibility will provide an opportunity to improve the persuasion process.

McCroskey et al (1973) propose five dimensions of source credibility that people tend to evaluate, including competence, character, sociability, composure, and extroversion. Each of these dimensions function independently to affect the source’s effectiveness as a communicator. However, the perceived source’s competence is believed to be the most important sign of how people judge credible or non-credible sources.

4.4.1.1 Competence

Source competence is the source’s knowledge of the communication subject. In the event of persuasion and informing, source competence is especially crucial. Examples of source knowledge are often seen, such as when a journalist interviews a “leading expert” on a particular issue. The leading expert’s title, such as Professor or Doctor, may enhance receivers’ perceptions of the source’s knowledge. Nonetheless, if a

communicator is perceived not to be knowledgeable about the subject, even if they are in fact experts, they are unlikely to persuade or inform receivers. A communicator can also refer to prior experience, use evidence, and prepare communication messages thoroughly when engaging in communication events to increase their competence level.

In the context of soft strategies of visitor management, providing visitors with information as to why the applied rules and regulations are essential to ensure their safety and the protection of the resources is a good way to persuade visitors to observe the rules. When a ranger/guide/interpreter conducts an organised activity such as a guided walk, it is necessary to prepare sufficiently in advance. Visitors may find that the interpreter is not competent if their queries are not answered. For instance, visitors may ask the ranger the name of a tree, wildlife, or how the landscape is formed. If the ranger cannot provide answers promptly and correctly, visitors are likely to doubt the credibility of the ranger. Moreover, evidence of visitors or wildlife being injured because visitors try to feed them, photo or video programme illustrations of inappropriate use of campfires, are also effective to persuade visitors and should be used in administrative and interpretive materials widely. This conveys the persuasive messages instantly, as they can be based on real incidents resulting from improper visitor activities. Such credibility is likely to add weight to the administrative and interpretive information such as visitor codes to persuade visitors to observe the codes and not to carry out undesired activities.

4.4.1.2 Character

The dimension of the source character means goodness and trustworthiness of the source. When receivers perceive that a communicator is not quite trustworthy, they are less likely to listen to the communicator, subsequently, it is more difficult for the communicator to achieve the communication goal. An individual's perception of another's trustworthiness or goodness is highly personal. People can judge someone's competence based on objective qualifications such as education level and work

experience, however, they may decide that someone is not trustworthy based on their immediate impression (Burgoon et al, 1994).

In tourism destinations, many site personnel, especially those who have direct contact with visitors, are usually required to wear a uniform, which identifies them as being representative of the managing agency, and thus, more trustworthy. Moreover, it is essential to maintain the tidiness and cleanliness of their uniforms, and not to smoke or eat when visitor are in sight in order to impress visitors with their professionalism and trustworthiness. This professional and trustworthy impression is important in order to gain the visitors' acceptance of the persuasive messages the site-managing agencies intend to deliver.

4.4.1.3 Sociability

When a message receiver perceives that the source is likeable, the source is thought of as sociable. In tourism destinations, it is rare that visitors and site personnel have known each other for long and like each other. Referring to the source character above, visitors may use their first impression to judge site personnel's trustworthiness and competence. Site personnel are required to be helpful, friendly and warm because these factors combined together make them more approachable. If visitors are not willing to have contact with site personnel, there will be no communication and persuasion does not occur between visitors and site staff.

In the situation when the source is a non-personal type of media, such as signage, printed materials, computer equipment or audio-visual programmes, the sociability of the source may be interpreted as the physical conditions of the source. These non-personal media that show signs of neglect, for instance, faded, broken, vandalised, worn down or out-of-order do not present themselves as "likeable and welcoming". Instead, visitors may be frustrated because they cannot receive their needed information through these media because of the inadequate physical conditions that lead to the failure of information delivery.

4.4.1.4 Composure

The dimension of source composure suggests that if the source can stay composed, especially under stressful conditions, they will be perceived as being more credible than those who lack composure. A speaker who is nervous or uses “ers” and “uhs” might be perceived as being less knowledgeable. In turn, the speaker will be less able to persuade the message receivers (Miller and Hewgill, 1964). Thorough preparation prior to communication with a crowd of people helps to reduce nervous feelings. In environmental interpretation of soft visitor management strategies, rangers/interpreters are required to arrange necessary equipment for a conducted talk or guided walk well in advance, to prepare detailed information about the topic they are to present, and to start the activity on time (Ham, 1992; Risk, 1982). Prior setting up of equipment allows interpreters sufficient time for them to organise themselves before their encounter with visitors. Moreover, the preparatory work increases their confidence, and in turn, they should be more composed.

4.4.1.5 Extroversion

An outgoing person is likely to engage in communication without too much difficulty, that is, the dimension of extroversion. An extroverted person is not usually afraid of communicating with others. They may be seen as active speakers and may be considered effective communicators as well. People, in general, enjoy communicating with an extrovert person, as the communication is often interesting and dynamic. However, an individual who is too extrovert and too talkative may take over the communication totally and other participants in the communication event may dislike the person or even withdraw from the communication (Burgoon, 1976). An effective communicator listens to the receiver in order to gain feedback. Consequently, the communication process is more fluent. In the case of environmental interpretation, rangers have to be enthusiastic to be able explain the features of the site to visitors, but, if they talk too much, visitors may be delayed for other of their activities, or may feel overloaded with unnecessary information.

Receivers' perceptions of source credibility are subject to change. Since the communication process is dynamic and involves constant interaction between the source and the receiver, their perceptions of each other are altered throughout the communication (Burgoon et al, 1994). People often make comments on others such as "he/she is not trustworthy" or "he/she does not seem very bright". They might change their impressions of others, for better or worse, after they get to know each other more.

In tourism destinations, when a visitor encounters site personnel, they may expect the staff to know everything about the site, including where the nearest café is, how much it is to stay in bed and breakfast, and why they did not see a particular species of bird during this visit but they saw it last time. Some visitors may like site staff to guide them through the area, and some might want to know answers of their queries and to be left alone to explore the site by themselves. Thus, establishing and maintaining these various dimensions of credibility is not a simple task for site-managing agencies. The basic rule is to be always friendly, approachable, and helpful. Moreover, personal and non-personal media should contain directorial, administrative and interpretive information in easy-to-understand language, illustrations and evidence. Visitors are less likely to prefer to receive information presented in difficult language in poor quality media during their visit to a destination.

4.4.2 Source's Power

Another important source variable, which is relevant to tourism and visitor management, is "power". More specifically, the perceived power by visitors plays a part in the relationship between site-managing organisations and visitors. Perceived power, similar to perceived credibility, exists in the source only when the receiver perceives it to be there (Burgoon et al, 1994). In other words, a person does not possess power unless they are allowed to exercise it (Johnston, 1994). French and Raven (1968) suggest five types of power a source can exercise during communication and persuasion process, namely reward power, coercive power, referent power, expert power, and legitimate power.

4.4.2.1 Reward power

Reward power refers to a source's ability to provide reward if a receiver complies with the source's request (French and Raven, 1968). This power is commonly practised in people's daily life. Parents tell children if they are good, they can choose a toy from a shop. The tale of Santa Claus is another example of using reward power to encourage children to be good. The limit of exercising reward power is that the reward offered has to be perceived by the receiver as important and worthwhile, or the impact will be minimised. For example, a group of sales representatives are told to boost their performance and if they achieve a certain sales target, they will be rewarded an extra ten percent bonus. To some of the sales representatives, the extra income is a desired reward, thus they will work harder to improve their performance. But to others, maybe the reward of position promotion to assistant manager is more attractive. In such a case, the extra bonus has little reward power to persuade them to improve their sales performance. In other words, the ability of the source to encourage compliance increases when the importance of the reward increases. Moreover, the source's ability to assess the needs and wants of the receiver helps to maximise the power of reward.

In the case of visitor management, rewarding visitors with promised high levels of experiences such as enjoying unspoiled nature and seeing wildlife wandering around in their natural settings may be seen as valuable incentives. Since these are what they expect to encounter at the site, visitors are more willingly to comply with the site-managing organisations when they are asked to keep the ground clean, pick up litter, keep off certain areas, and observe wildlife from distance instead of disturbing them. On the other hand, some visitors may be keen on being awarded as "Friend of the Forest" or "Member of the National Park" when they comply with persuasive messages, as these memberships are "real" rewards for their environmentally sound behaviour in the site. Thus, site-managing organisations can reward visitors with acknowledgement for environmentally friendly behaviour.

4.4.2.2 Coercive power

When a source has the ability to apply a negative reward, that is, a punishment, if the receiver does not comply, the source possesses coercive power. Referring to the operant conditioning theory of learning in Chapter Three, there are two ways to exercise punishment: applying negative reinforcement, and withdrawal positive reinforcement. Using the example of awarding memberships as a reward to demonstrate the practise of coercive power, if a visitor deliberately destroys facilities or resources in a site, the “Friend of the Forest” membership can be struck off by the issuing organisation. In this instance, the issuing organisation is exercising coercive power by withdrawing positive reinforcement. On the other hand, when a visitor is caught behaving inappropriately or illegally, such as littering, vandalising facilities or poaching wildlife, the site-managing organisation can arrest them for breaching law-enforced regulations. Here, the site personnel are practising the coercive power of applying negative reinforcement.

It is difficult to identify whether reward or coercive power is more effective than another to gain compliance. According to McGuire (1969), both are equally effective in inducing overt compliance to the source’s request. However, it is worth noticing that applying coercive power may tend to reduce the source’s attractiveness, or, the receiver may dislike the source if the coercive power is applied too often. In a tourism destination, site-managing agencies’ coercive power is usually supported and enforced by law. In fact, in national parks in the US and Canada, some park rangers are police to ensure resource protection and visitor safety.

4.4.2.3 Referent power

When a source makes an appeal to receivers to “do this for me”, the source is practising referent power. Referent power exists when the receiver wants to be liked by the source, or wants to be in the same group where the source belongs. When receivers perceive the feeling of identification in the relationship with the source, the

source is more likely to exercise referent power (Burgoon et al). Referring to Ajzen and Fishbein's (1980) Theory of Reasoned Action in Chapter Three, an individual's belief that specific individuals or groups think they should or should not perform a particular behaviour, and their motivation to comply with the specific referents (that is, subjective norm), affects this individual's behavioural intention. In other words, if a receiver is seeking identification in a particular group, when a person from this group persuades the receiver to do something, they are likely to be motivated to conform.

Using visitors as an example, if an individual is not usually environmentally friendly, but, when they visit a site with someone important, say, a girlfriend or boyfriend's parents, who happen to be environmentalists, this individual may adopt more environmentally friendly behaviour. Another example is a child who visits a site with their parents, and has just learned from their schoolteacher that litter should be put in a bin or taken home if there is no bin provided. This child may tell their parents to take the sandwich wrapper home rather than leaving it on the picnic table. Although the teacher is not there, the teacher's referent power influences the child to behave in a certain way, because the child wants to be considered a "good boy/girl".

4.4.2.4 Expert power

Expert power is similar to the dimensions of source competence discussed earlier. When receivers perceive that the source is superior in knowledge in a particular subject, the source is thought to possess expert power. Expert power is bestowed by others (Burgoon et al 1994), thus, it is subject to change according to various individual's perceptions. For example, a school child thinks their teacher knows everything, although this is obviously not true. In safari destinations, when visitors are told to "stay still and be quiet in order to observe a leopard" by their guide, they are likely to do so, since they perceive that the guide is an expert and will not disappoint them if they comply with the request. Site-managing organisations can exercise their expert power to persuade visitors to behave in a desired manner by communicating the purpose and outcome of the management strategies to visitors.

4.4.2.5 Legitimate power

Legitimate power is the power perceived by receivers that a source has the “right” to influence them (Burgoon et al 1994). For example, police can stop a car if they suspect the driver is driving under the influence of alcohol. The use of legitimate power usually involves the use of other types of power, such as reward or coercive power. For example, in tourism destinations, site staff, especially rangers, are perceived as having legitimate power to practise coercive power, such as charging fines for visitors’ inappropriate or illegal behaviour.

4.4.2.6 Factors influence source’s power

McGuire (1969) indicates that in order to maximise the effectiveness of power, it is necessary to understand how the receiver perceives the source. As discussed previously, a source’s power is a perceived phenomenon. Thus, when a receiver decides that the source has the ability to apply reward or coercive power upon them, the source is given the control of possible rewards and punishments upon the receiver. When a source attempts to practise reward or coercive power, the perceived ability of control is critical, since these two types of power are based on the receiver’s perceptions of whether or not the source can control their behaviour by applying reward or punishment. Therefore, usually visitors are more likely to comply with rangers, interpreters, or staff in information centres, but may not be persuaded by a local farmer, because the farmer is not considered to have the power to control their behaviour.

Moreover, the effectiveness of a source’s power is also affected by a receiver’s perception, of to what extent the source expects the request to be followed. For example, when a source asks a receiver to do something, but does not really expect the request to be fulfilled, the receiver may not comply with the request at all. In the context of visitor management, visitors are asked to take out the items they brought in with them to the site to keep the site clean and unspoiled. However, if the site is

littered, facilities are vandalised and poorly maintained, visitors are less likely to be persuaded, since the rubbish and broken facilities imply that the site-managing organisation does not really care whether visitors follow requests or not. Moreover, visitor codes, which are not law-enforced may not be perceived by visitors to be compulsory. In the case of hard visitor management techniques such as law-enforced regulations, visitors recognise the source power and are likely to comply with the regulations.

Furthermore, if a receiver perceives that the source has the ability to scrutinise whether the request is complied with or not, the source's power is maximised. Again, using visitor management as an example, if visitors are given sound reasons for rules and regulations, they are more likely to be persuaded to modify their behaviour. However, some visitors will not comply with the requests unless punishment is applied. If those visitors think that there are no rangers to inspect their behaviour, they may not hesitate to violate the rules and regulations. This explains why illegal timber processing and poaching occurs in many national parks or nature reserves worldwide. To people in poor regions, the economic gain from illegal animal and timber trades is so attractive that they are willing to risk their lives. Also, some of the parks or reserves are so large that there is not enough manpower to patrol the site regularly. Even, some of the rangers may interact with local villagers and police in poaching and illegal trades. These all contribute to the great difficulty of resource protection and conservation in many parks and nature reserves.

The table below is a summary of source variables which affect the effectiveness and process of communication (See Table 4.4).

Table 4. 4: List of source variables.

Variable	Example
Competence	Source's knowledge
Character	Source's goodness, trustworthiness
Sociability	Receiver likes the source and wishes to be liked by the source
Composure	Calmness of the source, especially in tense situations
Extroversion	Source is outgoing and actively involving in communication
Power	Source's perceived authorisation to practise reward, punishment, and legitimate power.

4.4.3 Receiver Variables

It is essential to understand receivers' characteristics since they increase the possibility that messages have the desired effects on targeted audiences. A source may be masterful in communication strategies, or may be thought as a credible or powerful communicator, however, a receiver can ignore, reject, modify or misinterpret the source's message (Burgoon et al, 1994; Johnston, 1994). Since each receiver is different in terms of age, sex, educational level, intelligence, skills, attitudes, and experiences, these variables will influence the outcomes of communication (Burgoon et al, 1994). In other words, a receiver thinks, feels, evaluates, judges, and reacts to messages, and therefore, a receiver has some control over their susceptibility to persuasive communication.

Referring to the characteristics of communication, it is transactional, affective and personal in nature. Therefore, not only the source but also the receiver variables actively influence their communication process. A receiver plays a part in determining the topic and the depth of interaction by deciding how much attention they pay to the source and the content. Often people select what they are interested in to listen to or see and ignore the rest. Thus, during the communication process, a receiver's reactions toward the source and the messages will decide whether or not further interaction will occur (Burgoon et al, 1994). For persuasive communication to be effective, both the source and the receiver have to adapt. That is, a receiver reacts to the source or the messages, and in turn, the source should act upon receiver's feedback to modify the

messages, communication strategies, or themselves to achieve the communication goal. In the following section, the receiver variables are divided into three groups: receiver demographic characteristics, psychological characteristics, and physical characteristics.

4.4.3.1 Receiver's demographic background

Receiver's age

Receivers' demographic characteristics include age, sex, socio-economic status, and intelligence. Some of these variables are obvious, for example, the receiver's age group and sex differences. An individual's mental development and age is usually a linear relationship. Hence, communication with children differs from communication with adults. Researchers suggest that children seldom indicate whether they understand messages until they reach the age of early teens (Burgoon et al, 1994). It is difficult for a source to know if communication messages are understood if there is a lack of indications from young children. Thus, when communicating with them, it is advised to ask them openly whether they understand the messages. On the other hand, when receivers are elderly, it is not unusual that they suffer from deteriorated eyesight and hearing ability if the font of words is too small, or if a speaker who talks too fast, or whose voice is too low or too high. These physical changes associated with ageing can affect the effectiveness of communication.

In the example of guided interpretive activities in a tourism destination, an interpreter may have a group of visitors whose age ranges from five to seventy-five. The interpreter has to take the differences in age into account when conducting a guided walk or talk. The initial concern is that speech speed and tone should be average and clear, which, in fact, are the basic requirements of an interpreter. Moreover, since age is an observable variable, when assessing feedback from young visitors, an interpreter should ask them directly if they understand the talk. Also, examining other adult

visitors' gestures, verbal and facial responses, the interpreter can envisage if they enjoy the activity.

However, research indicates that there is no clear evidence to demonstrate that as age increases, an individual's susceptibility to persuasion decreases (Costa et al, 1986; Helson and Moane, 1987; Johnston, 1994). It is unwise to assume that an older person is closed-minded and a younger age receiver is more open and extrovert, since there are other factors, such as religious beliefs and lifestyle that influence an individual's personality. It is also worth noting that different age audiences may have different interests in subjects (Burgoon et al, 1994). Thus, if an interpreter in a tourism destination is to introduce and explain the features at the site, it might be more effective to modify the contents according to the visitors' main interests. For example, if most of the visitors in the group are elderly, they may be more interested in knowing what the site was like in the past, what factors changed it, and what it will be like in the future. On the other hand, when most of the visitors are between thirty and fifty, they may want to know more about how the changes in the site will affect their lives.

Receiver's sex

Research suggests that women are more persuadable than men (Eagly, 1978; Scheidel, 1963). However, there is also a suggestion that there is no significant difference between men and women in terms of persuadability (Carmichael, 1970; Cronkite, 1975, in Reardon, 1981). Johnston (1994) argues that men and women differ in their expertise in varied topic fields, which may hinder their persuadability. Hence, some women may be more susceptible to persuasive messages when the topic area is traditionally male-oriented. Some men, on the other hand, might be more persuadable in a subject which is traditionally of female expertise. Montgomery and Burgoon (1977) also indicate that some studies identifying sex differences in persuadability may be due to the specific topics used in the research. Studies using male-oriented topics may show more attitude changes in women. Thus, differences in sex do not

provide sufficient evidence to demonstrate that either women or men are more persuadable.

Receiver's socio-economic status

Daniels (1970) argues that a receiver's social and economic background will have a significant impact upon their responses to the source. People's social and economic background usually indicates their culture, experiences, values, and attitudes. For instance, a poor person and a wealthy person are likely to have different perceptions toward many aspects in their daily life, such as having a pet animal and buying organic products. A wealthy individual most probably has no financial problem to afford to have a pet or to buy organic products where possible. However, a not-so-wealthy individual may have different attitudes.

In the case of tourism, these varied attitudes are often shown between Western visitors and locals. For example, wealthy Western visitors go to safari parks to view wildlife and to get close to the unspoiled wilderness. However, local people may see the same animal as an enemy since it destroys crops and livestock and is dangerous, or they may see it as potential food. In some situations, these wildlife might be viewed as a financial promise since they can be sold, either dead or alive, to foreign collectors. Visitors are thrilled when they encounter such tourism resources because of their rarity and values. Many of them are aware of the need to take positive action to help protection work in tourism destinations. Moreover, visitors are informed and encouraged to participate to help the site, such as by donations, or keeping off sensitive areas, or not leaving litter behind. Hence, whilst wealthy Western visitors are persuaded to protect tourism resources, they might find it ironic to see the locals are involved in poaching wildlife or stealing heritage resources. Because their social and economic status is so different, there is little common experience, belief, and attitude. Therefore, some visitor management strategies targeted at visitors may not persuade locals to stop poaching or stealing tourism resources.

These differences in socio-economic status might lead to different responses to persuasive messages. For example, the installation of on-site transportation and park-and-ride scheme is to encourage visitors to leave their cars in order to ease traffic congestion. Less wealthy visitors may welcome on-site transportation or park-and-ride scheme because either they do not own a car, or to them it is more economical to use public transportation. However, to wealthier visitors, the cost of using their own car may be insignificant, therefore, they may be less likely to be persuaded to use the public transportation. In such instance, the money-saving strategy as selling point to encourage the wealthy visitors to use park-and-ride or on-site transportation may not be efficient. Instead, site-managing agencies can appeal to them that the use of on-site transportation or park-and-ride is being responsible to the environment.

Receiver's intelligence

The relationship between an individual's intelligence and persuadability is not yet proved to be positive or negative (Burgoon et al, 1994). Nevertheless, McGuire (1969) argues that an individual with moderate intelligence is more susceptible to persuasion. The requirements for effective persuasion is that a receiver should attend to the message, comprehend the persuasive intent, anticipate the following changes in beliefs, attitudes and behaviour, and, critically evaluate the persuasive message. All these factors are related to individual's intelligence. The critical evaluation of a persuasive message is thought to have the ability to inhibit an individual's persuadability. Thus, a person with moderate intelligence should have sufficient ability to attend, comprehend, anticipate and evaluate persuasive messages. Nonetheless, their ability to evaluate the messages is just moderate, they are more susceptible to persuasive messages. On the other hand, a more intelligent individual might evaluate persuasive messages highly critically, hence, they will be less persuadable. Less intelligent people may lack the ability to attend, comprehend and anticipate the outcome of persuasive messages. On the contrary, Burgoon et al (1994) argue that one cannot assume that there is any significant relationship between an

individual's critical ability and persuadability, as an individual's susceptibility to persuasive communication is affected by a mix of factors, not only their intelligence.

In the context of visitor management techniques, visitors' intelligence cannot be tested prior to their participation in interpretive activities. Thus, interpretive publications, displays, audio-visual programmes, and activities are usually designed for general public. The information of environmental concern, resource re-use, recycle, protection and conservation, in fact, is widely publicised and available to people's daily life in many countries. It does not require an individual to be highly intelligent to know that littering will lead to negative impacts on the environment and wildlife, and saving energy and resources are essential since fossil fuel will run out eventually. Furthermore, the soft strategies of visitor management in tourism sites provide visitors with an opportunity to understand and experience resources more thoroughly. The combination of the information about environmental concern that an individual may receive in daily life and information delivered by tourism destination management organisations should enable visitors to understand more about the values and sensitivities of tourism resources.

4.4.3.2 Receiver psychological characteristics

Psychological characteristics of a receiver include self-esteem, aggressiveness and hostility, anxiety, and prior attitudes (Burgoon et al, 1994). In the communication with visitors, a visitor's prior attitudes certainly will have influence on their persuadability. However, their aggressiveness and anxiety caused by factors such as fatigue might also influence the effectiveness of communication. In the context of visitor management in tourism destinations, factors such as visitors' tiredness and their unfamiliarity with the site is possible to lead to their anxiety and hostility towards site staff or other fellow visitors. Strategies including the provision of clear and accurate on-site directorial and administrative information and friendly staff to help visitors solve their queries should be effective to reduce their anxiety caused by their unfamiliarity of the site.

Self-esteem

Early research indicates that an individual with lower self-esteem is believed easier to persuade than one who has a high self-esteem (Janis, 1954; Janis and Field, 1959). An individual with a high self-esteem is more confident in their beliefs and opinions, and may tend to challenge others with different ideas. This makes them less susceptible to persuasive communication (Burgoon et al, 1994). However, McGuire (1968) suggests that an individual with moderate self-esteem is more susceptible to persuasion. People whose self-esteem is low are often worried about their behaviour and ability to process a persuasive message fully. On the other hand, an individual with high self-esteem is confident in their ability to understand the message but is less likely to comply with the persuader. Nonetheless, to personnel from the managing organisations in a tourism destination, it is difficult to estimate visitors' self-esteem from a short encounter with them. Information delivered to visitors should be thoroughly researched in order to be accurate and up-to-date. Moreover, a warm welcome to visitors can minimise visitors' worries. Earnest greetings and accurate, detailed information not only show the professionalism of the site-managing agencies, but also help visitors carry out their visits to the site with little stress.

Furthermore, an individual's self-esteem is said to be closely related to their aggressiveness. People with high self-esteem may be more aggressive, and when they are frustrated, they may become hostile (Burgoon et al, 1994). A hostile receiver is usually unfriendly to the communication source. In tourism destinations, often visitors are not familiar with the site. In such a situation, visitors may be anxious and eager to know about the site, especially if they have had a long journey. Physical fatigue is also likely to result in hostile reactions toward site personnel, other visitors and even the resources. That is, they may be impatient and irritated by a long queue in tourist information centres, a busy café or car parks and they might just park their cars in inappropriate locations or leave their picnic litter on the ground because the bins in the picnic ground are too far away. Therefore, in order to reduce the visitors' frustration, the site-managing agencies should pay special attention to the quality and accuracy of

a variety of information to enable visitors to go around the site safely and comfortably. Moreover, well-maintained and managed facilities such as toilet blocks, cafés, car parks, walks and tracks, and tourist information centres are less likely to cause visitors' further stress or frustration.

There are, sometimes, clear indications of a receiver's variables which the source can take into account to adjust their communication approach and process. For instance, a site staff can suggest a gravel walk that is suitable for visitors with disability or a short walk when there are young children in the visitor group. Or the personnel can advise visitors to pay a visit to the museum or audio-visual show to gain general knowledge about the site instead of engaging in activities which may be too difficult or dangerous for young children. Such indicators are obvious and therefore, if the site staff recommends a particular location or an activity that is not suitable for visitors who show clear signs of not being able to carry out the activity, visitors are likely to be irritated.

Receiver's prior attitudes

Prior attitudes are the result of an individual's learning experiences. Every receiver in a communication process has a set of prior attitudes and uses these attitudes in the communication messages (Burgoon et al, 1994). Hillis and Crano (1973) suggest that an individual who has strong attitudes and beliefs about a specific topic behaves in ways that reinforce their opinions. They may look for information that confirms their opinions and are likely to avoid messages that challenge their beliefs. Also, they might misinterpret messages that are different from their own beliefs. In short, an individual with strong prior attitudes on a topic is difficult to persuade. For instance, an individual who believes in animal welfare and is an animal right activist is unlikely to accept the idea of using animals for drug testing.

In general, messages about resource protection are widely available in most societies. Although not everyone actively recycles and conserves resources, resource protection

has become general knowledge to many people. Hence, the soft techniques of visitor management need not repeat the importance of conserving resources. Instead, they can provide visitors with a chance to have a closer encounter with tourism resources by guiding them to experience and to explore the resources. By informing visitors about the sensitivity and values of the resources, they can reinforce the visitors' attitudes toward resource protection. Furthermore, by informing the visitors as to what actions they can take to help conserve and protect the destination, such as not lighting fires, not approaching wildlife, and not purchasing souvenir made by endangered species, the visitors may be more susceptible to the persuasive information from their first-hand or close interactions with the sensitive resources. In turn, they are likely to modify their behaviour to be more appropriate during their visits to the site.

4.4.3.3 Receiver's physical variables

Last but not least, a receiver's physical variables are crucial to successful message reception, which is necessary in the communication process. Sound plays an important part in the communication process, and, listening is the primary skill in any communication situation (Burgoon et al, 1994; McLuhan, 1964). Listening skills are the abilities to hear, comprehend, and retain communication messages. An individual's physical ability to hear is the ability to receive sounds. Comprehension is the ability to interpret and understand the spoken messages. Retention refers to the ability to remember what has been said. A receiver's demographic characteristics such as age and educational level can influence their ability to hear and comprehend when the sound is too high or too low, or when the messages contain complex words and meanings.

In addition, receivers' factors such as fatigue, distractions from the surroundings and from the source influence a receiver's ability to listen. For example, when a visitor is tired, or the weather is too cold, too hot, or it is raining, or they are not interested in the activity or the information, all these factors will influence this visitor's message reception, let alone retention. Furthermore, sensitive statements on race or religion in

the information delivered to visitors should be avoided to reduce possible discomfort. Only when visitors are motivated to participate in the communication will the techniques of visitor management be effective. When receivers are visitors at a tourism destination, they may be less receptive to communication messages. Site-managing agencies should note that clear, accurate, humorous, interesting, and knowledgeable information is more likely to be noticed by visitors. Getting visitors to notice the message and engage them in the communication is the initial step to get the messages across.

As discussed previously, receivers' feedback is essential in the effective communication process. In guided activities, the ranger or interpreter should encourage visitors to interact during the activity. In so doing, visitors have the opportunity to clarify their queries so that the ranger can assure visitors of an enjoyable and fulfilling experience. Moreover, from visitors' feedback of facial and body language, such as a frown, yawn, or daydreaming, an environmental interpreter learns if the communication is effective and what modification is needed to improve the guided activity.

Table 4.5 offers a list of receiver variables which influence communication (See Table 4.5).

Table 4. 5: List of receiver variables.

Variable	Example
Demographic characteristics	Age, sex, socio-economic status, intelligence
Psychological characteristics	Self-esteem, prior attitudes
Physical characteristics	Listening ability, including hearing, comprehending, and retaining the information.

4.5 THE APPLICATION OF THE COMMUNICATION AND PERSUASION TO VISITOR MANAGEMENT

Persuasive communication usually has a central role in the techniques of visitor management. In spite of the various media used to deliver directorial, administrative and interpretive information, the aim is the same: to influence visitors' behaviour to be more environmentally friendly when they visit a site. These persuasive messages include the rarity of the resources, their values in human wealth, history and culture, their gradual changes over time, and the possible outcome if there is a lack of resource preservation, and what visitors can do to contribute to protect the resources. Other visitor management strategies such as entrance fees and car park charges, staff patrol, and restrictions on access are used to control visitors' behaviour and activity directly and immediately. Nonetheless, communication and persuasive messages provide reasons for those hard visitor management techniques and to encourage visitors to appreciate the management effort to ensure high quality tourism resources and high level of visitor satisfaction. Some visitors may engage in resource and facility vandalism, and would not understand and appreciate the values of the resources, nevertheless, the function of persuasive messages in visitor management in tourism destinations should not be underplayed. Moreover, it will not be sufficient if persuasive communication is singled out to be the only visitor management strategy but should be integrated with other management strategies to heighten its performance.

The informing, entertaining, educating and persuasive functions of communicating with visitors support one another in the context of visitor management. For instance, when persuading visitors to go to alternative sites in order to channel visitor flows to less visited area and to reduce pressure, visitors should be informed of the advantages of visiting the alternative sites, including less crowded, more relaxing experience, high quality tourism resources, easy accessibility, and the provision of visitor activities and ancillary services. When a particular site is the renowned attraction, it can be difficult to encourage visitors to swap it with another site. Therefore, in order to persuade

visitors to go to other spots they should be well informed with the pros of the alternatives and the cons of the honey-pots. Moreover, visitors should be made aware of possible waiting times, opening hours, traffic conditions, and the last entry time where applicable to the famous site. This enables visitors to plan their visit more efficiently. With abundant information in hand, visitors may be more likely to be persuaded as they are more in control of the availability of their time and activity opportunities, which, in turn, should enhance their enjoyment and satisfaction.

On the other hand, communication with visitors is needed as research findings show that visitors and site managers may hold different perceptions of the degradation of the environment wherein visitors pursue recreational experiences and activities (Roggenbuck, 1992). For visitors to observe the rules and regulations applied in a site and to modify their recreational behaviour accordingly, they should be made aware of the values and the gradual deterioration of the resources. Previous research conducted by researchers in the US indicates that visitors' perceptions of environmental impacts are usually one of the following three possibilities: (1) they fail to notice it, (2) they notice it, but it does not bother them, and (3) they notice the deterioration and it causes negative reactions (Cole and Benedict, 1983; Lucas, 1979; Manning, 1986; Knudson and Curry, 1981).

If visitors do not perceive that the resources are deteriorating, or the degraded resources are not considered to affect their experience, they are unlikely to behave more environmentally friendly. Hence, in the context of visitor management, effective communication suggests that visitors are aware of, understand, believe and accept, and remember the messages relating to the impacts resulting from tourism activities on resources (Moscardo, 1999). According to Slater (1992), it is necessary to consider the following unavoidable factors when communicating with visitors: since messages are communicated through site staff or media, they may not be seen or heard. If they are seen or heard, it is possible that they are perceived as unimportant, and, therefore, visitors will not pay attention to them. Even if these messages are perceived as important, they may not result in the desired behavioural modification.

Taking these cautions into account and referring to Figure 3.5 in Chapter Three, the Model of Reasoned Action integrated with external factors proposed by Knudson et al, (1995), the complete model is now shown below (See Figure 4.7). In this model, an individual's external factors influence their reception, acceptance and integration of messages, which, will also partially influence their attitudes and subjective norms towards their intention to behave in a particular manner. If visitors hold different perceptions from site managers, or if they do not see the deterioration of resources detrimental to their enjoyment and experiences, the messages are unlikely to be received, accepted and integrated. In turn, it will be more difficult to affect their intention to perform environmentally sound behaviour. In other words, it is difficult to achieve the communication goals that the site managers want to achieve.

If there is no message receiver, there will be no communication. The process of communicating with visitors is that firstly they need to notice the message. Once they have received the messages, they can decide whether to accept them or not. If visitors accept and believe the messages, they can integrate them in their cognitive structures prior to the formation of their intentions to conduct behaviour. The relationship between learning, attitudinal modification and performance of behaviour is a complicated one. Nevertheless, communication with visitors initiates the process. Without the awareness of exposure to new information, an individual's cognitive structure stays stable, and, learning as well as behavioural modification will not take place. This notion may explain the reason that site-managing agencies employ various media to present messages in the hope that these messages will be delivered to visitors successfully.

The following are examples of communication with visitors in the context of visitor management that demonstrate the informing, entertaining, educating and persuasive functions of communication.

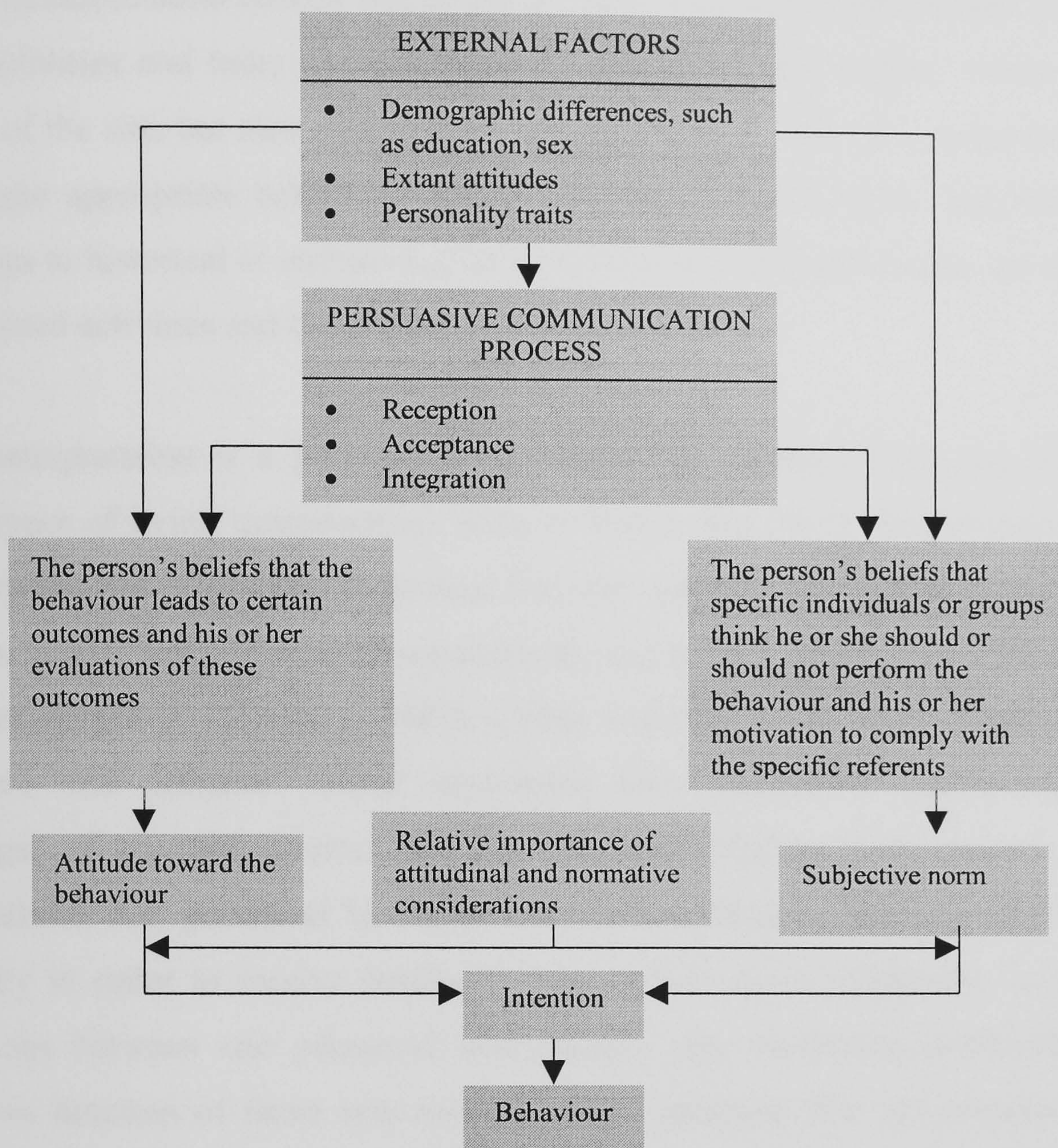


Figure 4. 7: The extended model of Theory of Reasoned Action applied in the context of Environmental Interpretation.

Source: Knudsoon et al, 1995.

4.5.1 Attended Style of Communication with Visitors

Attended communication with visitors is carried out by site personnel. Examples of attended services include visitor information centres, information booths, conducted visitor activities and talks, and living interpretation (Cooper, 1991; Ham, 1992; Sharpe and Hodgson, 1982). Information centres and booths usually serve as focal points where information about the site is available to visitors. Visitors, especially on a first time visit, often come to information centres or booths to obtain information, which is useful to plan their activities upon their arrival. Hence, it may be seen that the primary

function of information centres and booths is informing. On the other hand, conducted visitor activities and talks and living interpretation not only inform visitors of the features of the site, but also entertain and educate visitors, and may persuade them to adopt more appropriate behaviour during their visit. Guided walks and hikes, cave tours, trips to historical or archaeological sites, bus tours, campfire talks, are examples of conducted activities and talks (Ham, 1992; Risk, 1982).

Living interpretation is a personal demonstration of aspects of the site. There are several types of living interpretation, such as first-person living interpretation, which is a costumed role play of an individual and the story is often related to the site at a particular time. Craft and skill demonstrations, and cultural festivals are also common living interpretation (Garrison, 1982). These activities when well constructed and performed can enhance visitor enjoyment and experience significantly. The advantages of attended services are that they communicate with visitors directly, which allows site personnel to adjust their communicate strategies and contents constantly in order to receive feedback from visitors more efficiently. In turn, the interactions between site personnel and visitors may contribute positively to the persuasive function of these activities. Research indicates that the presence of site personnel is welcomed by visitors (Lime and Lucas, 1977), and many of them enjoy the opportunity to talk to the staff (Roggenbuck and Ham, 1986).

4.5.2 Non-personal or Unattended Style of Communication with Visitors

Non-personal communication relies on media to deliver messages to visitors. These media are defined as “the means, methods, devices, and instruments by which the interpretive message is presented to the public” (Sharpe, 1982b, p. 101). There is no single “best” medium to perform the message delivery, on the other hand, it is suggested that multiple media are usually more efficient than one medium to convey information to visitors (Roggenbuck, 1992; Slater, 1992). This is not surprising since effective communication initially needs to maximise visitor exposure to messages to ensure that messages are received, which, requires personal and non-personal media to

channel messages complementarily. These media include audio devices, slide shows, video tapes, publications, exhibitions, signs, labels, and computers.

Information can include the demonstration of “model behaviour” to provide visitors with the desired form of behaviour and activities (Winett, 1992). The function of “model” is well explained in the concept of Bandura’s observational learning in Chapter Three (Bandura, 1977; Hergerhahn, 1982). The interactions between site personnel and visitors are effective ways of providing visitors with examples of model behaviour. However, the use of audio-visual shows and printed materials to communicate the desired behaviour is likely to reach a wider audience of visitors. In addition, visitors can purchase publications and videotapes. These media will continuously remind visitors of appropriate behaviour and activities in the site when visitors review them. Also, according to Fazio (1974, 1979b, in Roggenbuck, 1992), several types of media such as slide exhibitions, signage, and brochures increase visitors’ awareness of applied rules and knowledge of the site when these media are employed alone or jointly. Last but not least, many media, such as publications, exhibitions, signs, labels, self-guided walks, and hand-held audio devices, allow visitors to receive and process messages according to their own preference and pace. Also, if there is any confusion, visitors can repeat or replay these media until they are satisfied. In guided walks or conducted talks, it is unlikely for an individual visitor to quicken or slow down the speed of the activity, which may result in decreased enjoyment and loss of communication messages (Roggenbuck, 1992).

Moreover, some media can reach visitors prior to their arrival at the site, which will help visitors plan their trip. Visitors will not encounter site staff until they arrive at the site. It is also probable that they may not see site personnel at all if they do not stop at information centres and information booths. Geographical remoteness also reduces the frequency of encounters with site staff and rangers. If the site-managing organisations want to persuade visitors to, for example, visit a less known location, or to be aware of the use of camp fires, these messages should be received before visitors’ trips and activity plans are decided. In some destinations where permission for entry and/or

camping is required, information leaflets, brochure and maps can be sent to visitors together with the permission (Lucas, 1981, in Roggenbuck, 1992).

Other examples include the research conducted by Huffman and Williams (1987) with user-friendly microcomputer programmes enabling backcountry hikers in the Rocky Mountain National Park, USA to obtain information on trails. Information on lightly used trails is provided both in brochures and computer programmes. Research results show an increase in visitors who receive information about these less visited trails from brochures select one of the trails, and, a significant increase from visitors who use the computer programme to gain the information. Similar research on the effectiveness of microcomputer based information in the Great Smoky Mountains National Park of North Carolina and Tennessee, USA, carried out by Hultsman (1988), shows that visitors consider that touch-sensitive computers provide new information, an organised list of activity opportunities and itineraries in the Park, and, the results indicate that many visitors used the computer produced itineraries. For the majority of visitors who used these itineraries, their enjoyment is enhanced. These examples demonstrate that not only site personnel can persuade visitors to choose alternative spots, but also non-personal media can achieve persuasive function.

4.5.3 The Potential of Persuasive Communication in the Context of Visitor Management

The effectiveness of persuasive communication to manage impacts resulting from visitor activities largely depends on the type of impact, the behaviour involved in, and motives for the behaviour (Roggenbuck, 1992). The following describes research conducted in the US: a study of general resource impacts and visitor conflict by Hendee et al (1990), and research into more specific and depreciative behaviour and vandalism carried out by Gramann and Vander Stoep (1987). Based on these studies, Roggenbuck (1992) suggests the use of persuasive communication may maximise the effectiveness of the management of a site, but cautions that these suggestions can only be treated as a “best guess” since there is a lack of research relating to the

effectiveness of persuasive communication in the context of managing visitors' behaviour.

Hendee et al (1990) identify five types of problematic visitor actions, namely illegal, careless, unskilled, uninformed, and unavoidable actions. These actions are categorised according to the visitors' awareness of and motivation for their behaviour. Hendee et al (1990) also suggest managerial responses to these activities. According to the suggested visitor management techniques, Roggenbuck (1992) indicates the potential degree of effectiveness of persuasive messages (See Table 4.6).

Table 4. 6: Problematic visitor behaviour and the potential of persuasion for reducing these actions.

Type of visitor action	Example	Management response	Persuasion potential
Illegal actions	Motorcycle violation Theft of Indian artefacts	Law enforcement	Low
Careless actions	Littering Nuisance activities, such as shouting	Persuasion, education about impacts, rule enforcement	Moderate
Unskilled actions	Selecting improper camping location Building improper campfire	Primarily education about low impact use practises, some rule enforcement	High
Uninformed actions	Concentrated use Unbalanced visitor distribution	Educational information	Very high
Unavoidable actions	Loss of ground cover vegetation in campsite Human body waste	Reduction of use levels to limit unavoidable impacts Relocation of use to more durable site	Low

Source: Derived from Hendee et al (1990) and Roggonbuck (1992).

Illegal actions are wilful violations of park rules and regulations, such as the use of chainsaws and motorbikes in the wilderness, which usually lead to disruption of other visitors' experience and enjoyment. The managerial response should be law enforcement and a clear message of legal restrictions (Hendee et al, 1990). On the other hand, the use of persuasion is likely to achieve only limited effectiveness. However, Roggenbuck (1992) believes that providing information on the rationale for

the applied rules and regulations in the site may help to lower violations. Careless behaviour such as littering and plant picking is actions of which visitors know that they are not appropriate, however, they perform these actions without thorough thinking. Although Hendee et al (1990) and Roggenbuck (1992) agree that visitors' behaviour may be improved by educating them on the impacts of inappropriate action, the effectiveness of using persuasion to reduce the occurrence of these careless actions is argued to be just moderate. However, if visitors can be reminded continuously and if persuasive strategies are frequently changed, persuasive communication may be successful (Roggenbuck, 1992).

Unskilled actions result from a lack of skill or knowledge of what appropriate behaviour and activities are in a site. It is believed that persuasive communication might have high potential for minimising impacts from unskilled behaviour (Roggenbuck, 1992). Persuasive messages should focus on information of appropriate and desired activity to participate in, and the outcomes of incompatible behaviour. Applying rules and regulations, together with the persuasive communication, the detrimental outcome of unskilled actions is hoped to be reduced. Uninformed actions such as concentrated use in one location resulting from unevenly distributed visitor flows can intensify some impacts and conflicts between visitors themselves and between visitors and the resources. This type of behaviour usually occurs when visitors are not familiar with the site. Wanting to persuade visitors to visit alternative spots, the provision of efficient information prior to visitors' arrival is critical.

Roggenbuck (1992) suggests that persuasion has a high potential to reduce impacts caused by uninformed visitor actions. In fact, the impacts resulting from unskilled and uninformed visitor activities could be reduced significantly if persuasive messages can be delivered to visitors well in advance of their trip. Furthermore, directorial and administrative information of what to do and where to go should be available to visitors when they arrive at the site to remind them and to serve those who had not yet received such information.

Persuasion has little effectiveness on unavoidable visitor actions. Just a few people are likely to cause changes in flora and fauna (Hendee et al, 1990). The more effective way to minimise such impacts is by management strategies, which involve hard management strategies such as temporal or permanent closure for resources to “rest”, restrictions on certain activities, resource hardening and alteration, facility relocation to more durable areas. However, informing visitors of what they should be aware of, for instance, the values of the resources, how to dispose of human waste, when the mating seasons are for wildlife, and where their breeding grounds are, is still necessary, since visitors might be more knowledgeable and more concerned about their activities after their receiving such information (Roggenbuck, 1992).

Research into depreciative behaviour conducted by Gramann and Vander Stoep (1987) is based on visitors’ motives for these actions. These actions include unintentional, releaser-cue, uninformed, responsibility-denial, status-conforming, and wilful violations. In the table below, Roggenbuck (1992) provides another approach to identify the potential of persuasive communication (See Table 4.7).

Persuasion is believed to have a high to very high degree of potential to influence visitors' unintentional and uninformed behaviour. These two types of actions occur when visitors fail inadvertently to observe the applied rules and regulations. Site-managing organisations should respond to these actions by informing visitors to gain their compliance. There may be visitors opposed to these regulations, but communicating by persuasive messages to explain the need for, and the benefits of, applying these rules and restrictions, visitors' knowledge should be increased, and, they might be more willing to modify their behaviour to be more appropriate (Roggenbuck, 1992).

Table 4. 7: Depreciative visitor behaviour and the potential of persuasion for reducing the behaviour.

Type of behaviour	Example	Persuasion potential
Unintentional	Violation of quiet hours Entering wildlife sensitive zone Selecting improper campsite	High
Releaser-cue	Littering or litter encouraging more litter Vandalism invites more vandalism Noisy group encourages additional noise Low maintenance levels encourage further damage to public and private property	Low
Uninformed	Feeding wildlife Washing self and dishes in stream	Very high
Responsibility-denial	Littering Failing to pick up others' litter Failing to pay self-registration camping fee Inadequate disposal of human waste	Moderate
Status-conforming	Using drugs in the site Carving initials in trees Graffiti	No effect
Wilful violations	Poaching	Low

Source: Roggenbuck, 1992.

Responsibility-denial behaviour, such as not paying for parking or self-registered campsites, results from visitors' assumptions of no moral or social responsibility for particular behaviour in a site, although they might know that these actions are incorrect. Responsibility-denial behaviour is in fact commonly seen in people's daily life, for instance, many students try not to pay for television licence, or car owners avoid paying the road tax. Some of this behaviour is not only wrong, but also illegal. Often people think that since there is a low chance of being caught, it is worth trying to get away with not fulfilling the required responsibility. That is, the penalty is probably of sufficient severity but the enforcement is not a real threat.

Persuasive communication is thought to have moderate effectiveness when trying to modify people's responsibility-denial behaviour (Roggenbuck, 1992). This may be because people know that they are supposed to behave responsibly, but, in fact, they do not. In tourism destinations where some fee-charged facilities are self-registered or

rarely patrolled and checked, the loss of income to the site can be considerable. To target the problem, persuasive messages should indicate that fee paying for the facilities is for repairing and maintaining the quality of the facilities, as well as for resource protection. The messages should ensure that high standard facilities and resources are positively correlated with visitor enjoyment. Moreover, visitors should be reminded of their responsibility for making the payment, even when there are no staff in sight.

Referring to the occurrence of behaviour disinhibition in the theory of observational learning in Chapter Two, when an individual sees others successfully conduct a wrong behaviour without being punished, this individual may be encouraged to carry out the same behaviour. This concept explains the releaser-cue depreciative behaviour. When visitors see fellow visitors speeding, littering, defacing trees or historical monuments, or evidence of these depreciative actions, such as litter, vandalism, defaced resources, and graffiti, they may be encouraged to behave inappropriately. This evidence of depreciate behaviour shows that the site is not maintained and is neglected, and the applied rules and regulations are not worth consideration or obedience. Hence, Roggenbuck (1992) suggests that the potential use of persuasive communication to reduce this behaviour is low. Tackling such a situation, the management strategy is to inform visitors that these actions violate the rules and regulations applied in the site, and to enforce these regulations by law to prevent them from occurrence. Furthermore, regular patrols, maintenance and repairs should be carried out to reduce the frequencies of occurrence of releaser-cue.

Persuasion has little effect on wilful depreciative behaviour. Wilful violations are similar to illegal actions in the research carried out by Hendee et al (1990). Such wilful violations can significantly reduce other visitors' experiences in a site, and these illegal actions are likely to lead to extensive resource damage. Law-enforced rules and regulations are necessary and might be the only technique to tackle these actions.

Roggenbuck (1992) argues that it is unlikely to reduce status-conforming violations through the use of persuasive communication. If an individual's need to seek the confirmation of their status from their groups is superior to the fear of being fined for inappropriate behaviour, persuasion will not be functioning. Referring to Ajzen and Fishbein's (1980) Theory of Reasoned Action, an individual weighs their important referents' thoughts on whether they should conduct or not conduct particular behaviour, that is, a subjective norm. According to the Theory, an individual's behaviour is driven by their intention to act, and, their intention to act is decided by both their attitude towards the behaviour and subjective norm. If the force of an individual's subjective norm outweighs their attitude towards that behaviour, their intention to act and the final behaviour will be changed. Therefore, if an individual is concerned about their status in their group, they are likely to behave in such a way as to gain recognition from their important referents. Hence, if a visitor's important members want them to behave inappropriately in the site, for instance, killing wildlife, in order to gain their approval, persuasive messages will have little chance to prevent it from happening.

4.5.4 Effectiveness of Persuasive Communication in the Context of Visitor Management - Research Findings from Previous Studies

Many tourism destination personnel are optimistic about the effectiveness of persuasive communication with visitors. They believe that much inappropriate behaviour on tourism resources is unintentional and is a result of ignorance (Clark et al, 1971; Clark et al, 1972; Hart, 1980). Moreover, much problematic visitor behaviour in fact results from unskilled actions (Hendee et al, 1990). In such situations, visitors' inappropriate behaviour and activities are likely to be altered through the use of persuasive messages. However, there is no evidence to suggest that personal contact with visitors is better than using other form of media to deliver the persuasive messages. Nor is there proof that a particular medium achieves better informing and persuasive result than others (Martin and Taylor, 1981; Washburne and Cole, 1983).

Nevertheless, researchers agree that ensuring information reaches visitors is essential. Interpretive and persuasive messages should be delivered to visitors prior to a decision made and actions undertaken (Roggenbuck and Ham, 1986). For example, if visitors read or hear about keeping off sensitive sites when they are half way in to the wildlife breeding ground, the effectiveness of this information is reduced and some damage may be caused. Moreover, if the information is dull, or the persuasive messages are patronising, visitors may chose to ignore them or they may not retain the information for long period of time. Hence, it is necessary to identify the location and time to present and deliver persuasive information to ensure the maximum number of visitors can receive them at the right time.

Roggenbuck (1992) summarises the effectiveness of persuasive communication in the case of visitor management based on research carried out by other researchers (See Burde et al, 1988; Christensen and Clark, 1983; Clark et al, 1972; Dowell and McCool, 1986; Feldman, 1978; Finnie, 1973; Ham, 1983/1984; Horsley, 1988; Huffman and Williams, 1987; Hultsman, 1988; Iso-Ahola and Niblock, 1981; Jones and McAvoy, 1988; Krumpke and Brown, 1982; Lahart and Bailey, 1975; Lime and Lucas, 1977; Manfredo and Bright, 1991; Marler, 1971; Muth and Clark, 1978; Nielsen and Buchanan, 1986; Oliver et al, 1985; Olson et al, 1984; Roggenbuck and Berrier, 1982; Sieg et al, 1988; Vander Stoep and Gramann, 1987; Wagstaff and Wilson, 1988). The results of the application of persuasive communication to visitor management techniques are divided into three groups: (1) knowledge - attitude - behaviour intention changes resulting from persuasion; (2) selection of different recreation locations after receiving persuasion; and (3) reducing resource impacts by persuading visitors. Following is the findings of the use of persuasive communication in the context of visitor management (See Table 4.8).

Table 4. 8: The potential effectiveness of the application of persuasive communication with visitors - summarised research findings from previous studies.

Knowledge - attitude - behaviour intention changes

Persuasive interpretive programmes and educational workshops are effective in increasing knowledge, favourable attitudes and positive behavioural intentions toward park rules and resource protection.

Persuasive messages delivered by site personnel are no more effective than other non-personal media in increasing knowledge and favourable attitudes.

Media such as brochures, slide shows and audio cassettes are usually more effective in improving knowledge and attitudes than signs.

Using multiple media to deliver persuasive messages is more effective than a single medium in increasing knowledge and desired attitudes.

Visitors who have little knowledge or experience about the site are more likely to be affected by persuasive messages with respect to improve knowledge and increase the formation of desired attitudes and intentions to conduct desired behaviour

Selection of different recreation locations after persuasion

Persuasive messages are usually effective in altering visitors' choice of locations to undertake their recreational activities.

It is likely to increase the possibility of changes in recreational locations if persuasive messages can reach visitors in advance.

Visitors with little knowledge or experience about the site are more likely to be influenced by persuasive messages with respect to selecting routes to take and locations to visit.

User-friendly computerised information systems programmed to meet individual needs are more effective in influencing visitors selecting routes or locations to visit than other non-personal media.

A combination of impersonal and personalised persuasive communication channels is more effective than the impersonal media alone in altering some visitors' selections for route and location.

Reducing resource degradation

In the short term, persuasive messages are effective in reducing depreciative behaviour such as littering.

Findings indicate that incentives such as a promise of a reward may be needed to encourage litter pick-up in parks. Nevertheless, in less developed sites, verbal appeal only can be effective to increase litter pick-up.

Persuasive messages should be specific and clear if they are to be effective in reducing litter problems.

Provision and proper placement of rubbish bins can reduce litter problems.

Although incentives can reduce depreciative behaviour such as littering and vandalism, however, persuasive messages that aim to raise visitors' awareness, such as the consequences of inappropriate behaviour, also can effectively persuade visitors to conduct the desired behaviour.

Site personnel can role model the appropriate behaviour since it is likely to encourage children to pick up rubbish in the site.

Signing a petition indicating support for litter-free sites may reduce litter problems in the site.

Findings suggest that a combination of personal communication and written messages to decrease litter and tree damage in campgrounds are more effective than the written messages alone.

From the above summary of previous research, one can conclude that the timing to communicate with visitors is crucial. Too late and it is unlikely to persuade visitors to undertake the desired behaviour and activities. Too early, visitors might not be able to recall the information they received. Moreover, no single medium stands out from others in delivering persuasive information. Researchers suggest that the use of mixed personal attended and non-personal media is more effective than relying on only one type of medium. Also, the use of law-enforced regulations of hard visitor management strategies cannot be left out, especially in the situations when visitors carry out wilful illegal actions to damage the resources. Moreover, temporary or permanent closure of some locations may be used in conjunction with directing visitors to alternative locations. In other words, visitors are “forcedly” persuaded to visit other locations.

Resource hardening and alteration such as the installation of rubbish bins, gravel walks and cycle paths, campground and other tourist facilities are necessary to encourage appropriate visitor behaviour as it supports the persuasive messages. These facilities “communicate” with visitors in terms of inviting visitors to use them and abandon inappropriate behaviour such as littering, carrying out activities and leaving their vehicles rampantly in a destination. In addition, computerised information systems are usually welcomed in parks in North America. In the UK, the use of touch screens to provide information to visitors is growing. However, there is a need to research into the effectiveness of computerised information systems and whether they have the persuasive function in altering visitors’ behaviour. It might be possible that UK visitors are not as in favour of computerised information systems as their North American counterparts. Nevertheless, there is an increase in the installation of computers in tourist information centres throughout the UK.

SUMMARY

Effective communication with visitors ensures visitors have safe and comfortable experiences within a site. In the context of tourism, communication is the instrument that delivers information relating to the site to the receiver - the visitors. Without

effective communication, the information will not be delivered to and received by visitors. In other words, in the context of visitor management, communication serves the instrumental function to channel directorial, administrative and interpretive information to visitors. In so doing, visitors are informed, entertained, educated and persuaded.

The factors that affect communication source's ability to persuade and receiver's persuadability point out how to maximise the effectiveness of visitor management techniques. Some of the visitor management methods, such as regulations, provision of facilities, resource hardening and alteration, aim to persuade visitors to modify their on-site behaviour. Those factors should be taken into account in order to achieve the maximum results. Through a combination of attended and non-attended media, visitors are made aware of the information about the features, directions, and specialities of the site, as well as desired behaviour, applied regulations and restrictions. Hard visitor management techniques, on the other hand, are applied to forcefully persuade visitors not to conduct illegal behaviour. In short, effective communication with visitors is the backbone of successful visitor management.

CHAPTER FIVE

INTRODUCTION TO THE NEW FOREST

INTRODUCTION

This chapter provides a general background on the research site, the New Forest. The chapter is sub-divided into four sections:

- Facts of the New Forest
- Administration of the New Forest
- Resource importance of the New Forest, and
- Current tourism activities in the New Forest.

Various terminologies that are specific to the New Forest are reviewed in the discussion of the facts of the New Forest.

The information about tourism activities within the research site points out the growing pressure of tourism on the site, which is rich in human history and ecology. The consultation of the designation of the New Forest to be a national park began in October 2000 (by the Countryside Agency), and a public inquiry was called in the autumn of 2002 to finalise the decision of the New Forest National Park Designation Order drawn up by the Country Agency. Much of the planning and its implementation in the New Forest Heritage Area has been subject to tighter control and regulations regarding development, equivalent to that of a national park level since 1994, in order to protect the significant landscape of the site. In other words, the unique historical, heritage and natural landscape characteristics of the New Forest have been recognised by the government agencies and further protection and management would be applied when the New Forest National Park status is confirmed.

5.1 SOME FACTS ABOUT THE NEW FOREST

5.1.1 Glossary

Prior to any discussion of the facts about the New Forest, it is necessary to clarify some of the terms used and what they refer to in this research.

The *New Forest Heritage Area* covers the area between the urban areas of Bournemouth and Christchurch in the south-west and Southampton to the east. Its southern boundary follows the Solent to Lymington and westwards to the edge of New Milton and Christchurch, then northwards to Ringwood and Fordingbridge. The northern boundary of the New Forest Heritage Area includes part of Redlynch and stretches to Whiteparish. Its east side follows the Blackwater valley towards Totton and borders with Hythe and Fawley. The area of the New Forest Heritage Area is about 58,000 hectares, of which approximately half of it is owned by the Crown and subject to the Verderers byelaws for the common grazing of livestock. The rest of the area is largely in privately owned, and covers a mixed landscape of coastal scenery, meadowlands, heathland, and farmland (Forestry Commission and New Forest District Council, 1993; Forestry Commission, 1999; New Forest District Council, 2002a).

Crown Land, as opposed to privately owned areas, it is the land owned by the Crown and managed by the Forestry Commission. The size of the Crown Land is approximately 27,000 hectares, which comprises bogs and wet heath, heathland, grassland, lawn, plantations of conifers and broadleaved trees in the inclosures, and ancient and ornamental woodland (Cooper, 2002; New Forest District Council, 2002a).

New Forest Preamble refers to the legal boundary as defined by the New Forest Act 1964. The size of the Preamble is 37,500 hectares, comprises the land of privately owned, the Crown Land and timber plantation inclosures (Land Management Research Unit, 1996; Cooper, 2002).

Inclosure is an enclosed area of land that is fenced or otherwise separated from surrounding land for the purpose of keeping stock in or out. In terms of the New Forest and its management, the wood inside the fence is an Inclosure. It is for the growth of timber, and the Rights of Commoners are temporarily suspended within inclosures. The inclosures date back to 1483, and by enclosing these areas with stock-proof fences, the commoning animals were first excluded from timber producing areas (Cooper, 2002; Goriup, 1999).

Open Forest is the area outside the inclosure fences. As opposed to inclosures where livestock is not allowed in for grazing, Open Forest is open to commoners' livestock at all times (Goriup, 1999).

Adjacent commons are the privately owned lands with varied ownership (Cooper, 2002).

New Forest District stretches from the borders of Wiltshire in the north to the Solent in the south, and from the borders of Dorset in the west to Southampton Water in the east. There are various industrial bases in the district, and part of the district, the Crown Land, is managed by the Forestry Commission. The size of the District covers 75,100 hectares, with estimated population in 1999 of nearly 170,000 (New Forest District Council, 2002a) (See Appendix A for the map of the New Forest).

A Commoner is a person who occupies or rents a plot of land or a property where Common Rights in the New Forest are attached. In other words, the common rights are attached to property not individuals. Anyone can become a commoner. They have the rights of pasture which enable them to graze livestock in the New Forest. The famous New Forest ponies, although seem wild animals, are owned by the commoners and branded with an individual mark. It has become increasingly difficult for a commoner to sustain their lives by only practising commoning livestock. There are about three hundred commoners currently exercise the rights of common, grazing 5,000 animals, including 3,000 ponies and the remaining predominately cattle.

(Forestry Commission and New Forest District Council, 1993; Goriup, 1999; New Forest District Council, 2002c).

The Verderers Court dates back to the Norman times and it is one of the Britain's oldest judicial courts. Originally it was set up to administer a judicial system that protects the habitats of the New Forest. The laws ensured that the privilege of hunting of deer and wild boar remained to the King and his followers (New Forest District Council, 2002c). Today the Verderers are a statutory body sharing the management of the New Forest with the Forestry Commission. They act as regulators of development in the woods and heaths of the New Forest, and oversee the exercise of common rights in the New Forest (Goriup, 1999; Schuman, 2002).

Ancient and Ornamental Woodlands refers to unenclosed broad-leaved woodland, mainly are oak and beech. These areas are open to the deer and the commoners' animals. (Cooper, 2002; Forestry Commission and New Forest District Council, 1993; New Forest District Council, 2002c).

Agisters are unique to the New Forest. Today the Verderers appoint six official Agisters to deal with the everyday management of the 5,000 ponies and cattle grazing in the New Forest. They are responsible for the welfare of the commonable animals, and they also handle the accidents of animal injury and road kill on roads in the New Forest (Goriup, 1999; New Forest District Council, 2002c).

Keepers are employed by the Forestry Commission on behalf of the Crown to undertake duties including wildlife, conservation and recreation. There are currently twelve keepers, every of them has thorough knowledge of their responsible area, where they also manage the deer populations (New Forest District Council, 2002c).

5.1.2 The Landscape of the New Forest

In this research, the term "New Forest" refers to the New Forest Heritage Area, unless otherwise stated.

The research site, the New Forest Heritage Area, is situated south west of Hampshire, England: to the east is Southampton Water, and Bournemouth to the west. Its south faces the shores of the Solent between Lymington and Calshot spit. The River Avon forms the western boundary of the New Forest, while to the north the landscape rises gradually and forms the Hampshire Basin. The New Forest Heritage Area covers 58,000 hectares, with 37,500 hectares of land lie within the preambulation. Approximately fifty percent of the New Forest Heritage Area is owned by the Crown and managed by the Forestry Commission.

Less than half of the New Forest landscape is wooded, although the term "forest" may imply a vast wooded area to many people. Although the region has always had some open land, originally there were many more trees. Many of the vast areas of heather and moorland that are associated with the current New Forest landscape used to be densely wooded. The change of the habitats was caused by the Stone Age settlers, who used flints and bones to cut down the trees for building and cleared the ground for agriculture, and the process was accelerated during Bronze and Iron Age because of the more advanced tools (Forestry Commission and New Forest District Council, 1993).

The landscape of today's New Forest is a mosaic of various habitats resulting from centuries of human management and livestock grazing. The two major types of woodlands are the timber inclosures and the Ancient and Ornamental woodlands. The fast-growing conifers made up half of the timber inclosures, while in the ancient and ornamental woodlands, the broadleaved oak and beech are the majority. Forest lawn, heathland, valley bog and acid grassland are also the major features in the New Forest landscape.

The table below offers a summary of the basic information of the New Forest (See Table 5.1).

Table 5. 1: Basic information of the New Forest.

New Forest Heritage Area	58,000 hectares
The New Forest Preamble	37,500 hectares
New Forest District Area	75,100 hectares
Crown Land (comprise of open forest and inclosures)	27,160 hectares, of which, Open forest – 18,512 hectares Inclosures – 8,648 hectares
Annual forestry production	Conifers – 35,000 cubic meters (tonnes) Broadleaved – 4,000 cubic meters (tonnes)
Main forestry product	Saw logs – 23,000 cubic meters (tonnes) Pulpwood – 10,000 cubic meters (tonnes) Posts, rails, telephone posts and fuelwood – 6,000 cubic meters (tonnes)
Average annual rainfall	33 inches
Wettest month	October
Driest month	May
Average annual temperature	10°C (50°F)

Source: Cooper, 2002; Forestry Commission and New Forest District Council, 1993; New Forest District Council, 2002a.

5.1.3 The Historical Importance of the New Forest

King William I, also known as William the Conqueror, created the New Forest in 1079 as a new hunting ground for the Royals. The site was ideal for pursuing hunting as the area was thinly populated, covered by wasteland and woodland, yet it was close to the then royal capital of Winchester. Twenty years later, in 1110, the successor of William the Conqueror, William II (Rufus), was killed by a fellow huntsman's arrow while hunting in the Forest (Forestry Commission and New Forest District Council, 1993; Goriup, 1999). In 1745 the Rufus Stone was erected in what is believed to be the location where he was shot dead to mark this historical incident (Goriup, 1999). It

is now one of the tourist attractions in the New Forest. The declaration of the New Forest by William I and Rufus' hunting accident are probably the most well known historical stories about the New Forest.

The New Forest is not at all new, as its history can be dated back for thousands of years. The pollen record shows that man and nature have interacted over the centuries. The first signs of people and their livestock in the New Forest appeared in the Stone Age. The grazing of commoners' livestock as well as deer in the woodlands in the New Forest has helped the formation of the present look of the site. Grazing is an effective way of controlling the growth of the vegetation. Also, the trees have been managed by lopping, cutting and selective felling over time. Moreover, some of the wet ground was drained, and some winding streams straightened (Goriup, 1999). In other words, the formation of the New Forest landscape was the results of human influence and management, and it is the historical value of the site.

It would be unwise not to mention the activity of commoning and commoners when discussing the New Forest. To many people, the free roaming ponies form a large part of the images they have about the New Forest. These ponies, in fact, are not wild but owned by a commoner who pays a fee in order to enjoy the rights of having their ponies grazing in the New Forest. Ponies are marked with an individual brand to identify their owners. If not branded, these ponies are not to put out to graze in the Forest (Forestry Commission and New Forest District Council, 1993).

Commoners are the people who own or rent a property or plot of land in and around the New Forest which has rights of common attached. Currently, approximately three hundred commoners exercise these rights in the Forest (New Forest District Council, 2002c). Together they own 1,800 cattle, more than 3,000 ponies, and a much smaller number of donkeys, pigs and sheep. There are six ancient Rights of Common (See Table 5.2), and the most used and well known is the Common of Pasture. Nonetheless, only a handful of commoners are able to sustain their living from keeping livestock.

Most of them are part-time farmers and earn other income from other work (Forestry Commission and New Forest District Council, 1993).

Table 5. 2: Rights of Common.

Rights of Common	Description
Common of Pasture	The right to graze cattle, ponies, donkeys and sheep
Common of Mast	The right to turn pigs out on the forest during the pannage season, in autumn months when acorns and beech mast have fallen
Common of Fuelwood	The allowance of burning wood for use in a dwelling (also know as Estovers)
Common of Sheep	The right to depasture sheep
Common of Marl	The right to take limey clay to spread on the commoners' land as a form of soil of improver.
Common of Turbary	The right to cut turf for burning in a dwelling.

Source: Goriup, 1999; Forestry Commission and New Forest District Council, 1993.

It is necessary to note that the Common of Marl and Common of Turbary are not exercised at present. The tradition of commoning although dying out, is still continued by commoners. It is a way of life to many, however, the younger generation find it difficult to continue this practice due to the poor economic returns. Nevertheless, this tradition is essential to the New Forest ecological system, especially the grazing of livestock and ponies, which prevents the New Forest heathlands from disappearing from an overgrowth of herbage.

The Commoners' interests are represented by the Court of Verderers, which was established by the New Forest Act of 1877 and consists of ten verderers. The duty of the Court is to administer the commoning system, and to deal with all matters affecting the Open Forest. Five agisters are employed by the verderers, who are full-time officers to take care of the daily welfare and problems of the grazing livestock and ponies.

The New Forest had been an important source of timber for the building of navy ships for centuries. In 1483, the first inclosures were established for timber plantation in order to ensure the constant supply of timber for shipbuilding. The exercise of enclosing areas as timber plantation can be seen as the early conservation work and sustainable use of the resources, as some types of the shipbuilding timbers, especially oak trees, could take more than two hundred years to grow to the right size (Forestry Commission and New Forest District Council, 1993).

In the early nineteenth century, the Crown started a sixty-year planting programme in the New Forest. Many of these oak trees still remain in the New Forest as iron replaced wood to be the shipbuilding material. These oak woods are now essential to the present wildlife and scenery in the New Forest (Forestry Commission and New Forest District Council, 1993). The inclosures are the only areas in the New Forest where commercial forestry is carried out. Most of the inclosures are fenced to keep out commoners' livestock and ponies. Although grazing of livestock and ponies prevent the heathland from disappearing, when over exercise grazing, it can seriously reduce the richness of flora and fauna. The fenced inclosures provide areas where butterflies, moths and insects can once again thrive in the New Forest.

Although it is a popular tourism destination, the New Forest is also a working forest. Every year inclosures in the Forest produce almost 40,000 tonnes of timber for building, fencing and making furniture. As well as the people directly employed by the Forestry Commission working in timber production, many local people and business depend on the working forest, for instance, lorry drivers and traders. The conservation of flora in the inclosures is also being undertaken, including re-planting plants favoured by butterflies and moths, and providing a suitable habitat for the rare plant species that were once seen there. Hence, keeping a balance between the needs of the grazing of commoners' livestock, timber production and conservation, as well as providing tourism opportunities to the general public, is the task that New Forest managing organisations face.

The table below provides a summary of the historically important events of the New Forest (See Table 5.3).

Table 5. 3: The historically important events of the New Forest.

Year	Event
1079	New Forest created by William I
1110	William II (Rufus) killed while hunting in the New Forest
1483	New Forest Act allows inclosures for growing timber
1611	First recording felling for navy timber
1776	Scots pine introduced to the New Forest at Bolderwood and Ocknell
1851	Deer Removal Act – unsuccessful attempt to wipe out all deer in the New Forest
1877	Verderers' powers changed to protect commoners' interests
1924	Forestry Commission takes over the management of Crown Lands of the New Forest
1939-1945	Ten airfields built in and around the New Forest
1971	New Forest declared a Site of Special Scientific Interest
1992	Government agrees special status equivalent to a national park to allow tight control on development

Source: Forestry Commission and New Forest District Council, 1993.

5.1.4 The Resource Importance of the New Forest

The New Forest is recognised internationally for its ecological significance. For instance, the New Forest has the largest area of primary woodlands in Western Europe, whilst ninety percent of ancient forests in the UK have been destroyed. There has been little major influence of forestry activities such as planting and coppicing in the New Forest, and the present landscape is almost the same as it was in medieval times. Moreover, the New Forest has the largest area of Anglo-Norman sub-oceanic dry heath left in the UK. Its proportion of acid lowland bogs is also the largest in Europe. In particular, the New Forest is especially rich in acid bog, fen and wet heath vascular plants. Rare species inhabit the lowland bog in the New Forest. As much as seventy-five percent of lowland heath has been destroyed in Britain in the last two centuries, and the situation in Europe is worse, thus, these resources make the New

Forest unique and rich in natural resources (Land Management Research Unit, 1996; The Countryside Agency, 2000).

Furthermore, there are a few private estates within or bordering the New Forest Heritage Area where important habitats exist, and one of the main purposes of the management of these private estates is the conservation of the habitat. These estates include Cadland, Exbury, New Town Park, Beaulieu, Broadlands and Longdown. Natural conservation is recognised as important in the management in the private estates by the designation of the following (Land Management Research Unit, 1996; Goriup, 1999):

- Site of Special Scientific Interest (SSSI), such as in Exbury and Beaulieu.
- National Nature Reserve (NNR), such as North Solent National Nature Reserve, managed by Beaulieu Estate.
- Special Protection Area (SPA), which is under the European Union's Directive on the Conservation of Wild Birds.
- Special Area of Conservation (SAC) under the European Community Directive on the Conservation of Natural Habitats and of Wildlife Fauna and Flora.

Given that the New Forest covers a large area of land, and the landscape varies from woodland and managed forestry inclosures to bog and grassland, it is able to sustain a diverse habitat for a large number of species, for example (Land Management Research Unit, 1996):

- 27 species of English land mammal, except for the red squirrel;
- Almost half of the native British insect species;
- Eleven of the thirteen indigenous species of bat;
- Five of the six British native species of amphibian;
- 98 species of bird breed in the New Forest regularly.

In 1996, the Forestry Commission completed a thorough survey of the Ancient and Ornamental Woodlands, and developed a series of management proposals for their protection. The principles of the management and protection of the Ancient and Ornamental Woodlands are by promoting natural regeneration, the removal of exotic vegetation species and removing fences to restore livestock grazing. Through the New Forest LIFE project, the proposals were implemented. The European Union's LIFE-Nature fund provided finance for nature conservation on Europe's more important wildlife site – the Special Areas of Conservation (SAC). In the New Forest, the SAC stretches over 29,500 hectares. The New Forest LIFE Project is a partnership involving ten organisations working together to enhance this area's ancient woodlands, heathlands and wetlands. These organisations are: English Nature, Forestry Commission, Hampshire County Council, Hampshire Wildlife Trust, National Trust, New Forest Committee, Ninth Century Trust, Royal Society for the Protection of Birds, Verderers of the New Forest, and Wiltshire Wildlife Trust (Goriup, 1999).

The importance of the New Forest has been acknowledged and special status of some or all of the land in the New Forest Heritage Area has been designated to help the management and conservation of the area. The Forestry Commission and Verderers, representing the Crown and Commoners respectively, need to work together to manage the site and to prevent activities that may damage the resources. In addition, the Government approves the significance of the Forest and emphasises the conservation work in the New Forest. The Minister's Mandate for the New Forest 1999-2008 stresses that the Forestry Commission will manage the Crown Land according to the following principles (Forestry Commission, 2001a, 2001b; Goriup, 1999) (See Figure 5.1).

Minister's Mandate for the New Forest 1999-2008

The Forestry Commission will manage the Crown lands in the New Forest in accordance with the following principles:

1. Natural Heritage

Enhancing the importance of nature conservation of the New Forest in line with its status as a candidate Special Area of Conservation, through:

- Undertaking a programme of conversion and restoration to increase the area and/or quality of nationally and internationally important habitats, including pasture woodlands, heathlands and valley mires, grasslands and wetlands, rivers and streams;
 - Implementing the UK Forestry Standard and relevant commitments arising from the UK Biodiversity Action Plan and Forest Enterprise's and English Nature's Statement of Intent.
2. Cultural heritage
- Supporting a sustainable commoning tradition by maintaining open forest grazing in a scientifically sound way;
 - Preparing specific plans to ensure the protection and enhancement of Ancient Monument sites;
 - Taking into account the heritage value of the New Forest landscape when preparing its Forest Design Plans.
3. Public enjoyment
- Planning and managing the provision for access and recreation for local people and visitors, in ways consistent and compatible with the principles of conserving the natural and cultural heritage.
4. Rural development
- Contributing to the maintenance of a viable rural economy in the New Forest through the provision of work opportunities arising from the management of the Crown Lands, including timber production;
 - Cooperating with interested parties in maintaining business and employment opportunities dependent on the New Forest, especially tourism;
 - Carrying out rural development activities in a way that is consistent and compatible with nature and heritage conservation.
5. Working together
- Maintaining the practice of engaging in extensive local consultations, as part of the planning process, principally through the Verderers Court, the Consultative panel and the New Forest Committee.

The Forestry Commission will prepare a Management Plan for the Crown lands, which will incorporate these principles and the following objectives (shown in order of priority):

- i. Conservation of the nature and cultural heritage as the principal objective of management.
 - ii. Community engagement through greater public participation in decision making, promotion of rural opportunities, provision of access and recreation opportunities and increasing public awareness and understanding.
 - iii. Insofar as is consistent and compatible with the first and second objectives, efficient management of the Forestry Commission's operations, and appropriate generation of income from timber production and other uses of Crown lands.
-

Figure 5. 1: Summary of Minister's Mandate for the New Forest 1999-2008.

Source: Derived from Forestry Commission, 2001a, 2001b; Goriup, 1999.

The Minister's Mandate stresses the conservation of cultural and nature heritage of the New Forest is the first priority of the management, followed by the promotion of rural opportunities, provision of recreational opportunities and increasing public awareness and understanding. The commercial production of timber in the New Forest comes as the least concerned management objectives of the site, and is subject to be consistent and compatible with the first two priorities. This Minister's Mandate will be reviewed and renewed in 2008 (See Figure 5.1). The Management Plan prepared by the Forestry Commission for the Crown lands of the New Forest became operative before the end of 2001. It also includes component plans for the management of the Inclosures, the Ancient and Ornamental Woodlands and the Open Forest.

The designation of New Forest National Park status is not yet finalised, although since 1992, the Government has realised the need for extra protection for the resources in the New Forest Heritage Area in order to sustain the long-term use of the site, and has agreed a special status equivalent to a national park (Forestry Commission and New Forest District Council, 1993). Since 1994, the New Forest Heritage Area has been subject to planning protection equivalent to a National Park, allowing tighter control on development (New Forest Committee, 2002). In 1998, the Countryside Commission (now the Countryside Agency) recommended that the Government formally designate the New Forest as a national park. The status of national park will give the New Forest the highest protection and management of resources possible, since the status will be a permanent designation, and the National Park Authority will be assigned to care for the area. In September 1999, the Country Agency was given the go-ahead for the designation of New Forest National Park. A month later, the Countryside Agency began the process of creating the New Forest National Park (Countryside Agency, 2000).

In October 2000, the Countryside Agency started the consultation on the designation of New Forest National Park. The public, local authorities and many other organisations has since given comments on the proposed boundary and administrative arrangements. Since then the Countryside Agency had drawn up a New Forest

National Park (Designation) Order 2002, including detailed recommendations for special administrative plans. The Order was submitted in March 2002 (New Forest Committee, 2002). The Secretary of State for the Environment, Food and Rural Affairs will call a public inquiry in autumn 2002 before a final decision on the Designation Order is made.

5.2 ADMINISTRATION OF THE NEW FOREST

Administration of the New Forest is complicated and involves several organisations. Given the facts that the site covers a large area, its ecosystem is unique and sensitive, and there are economical activities such as commoning and forestry on going in the site, it is not surprising that there are various agencies undertaking the administration and management of the area. Each of the organisations holds specific responsibility, and their main objective is to safeguard the site for long-term sustainable use, and to promote conservation through effective coordination of policy and action among these organisations.

In 1990, the New Forest Committee was established to prepare an overall strategy for planning and to oversee the management needs of the area. It is made up of representatives from each of the different organisations, and very importantly, it coordinates the various bodies at the strategic level. The New Forest Committee is an informal organisation, and does not have statutory power, nevertheless, it is independent and has its own chairman and office (Land Management Research Unit, 1996; Forestry Commission and New Forest District Council, 1993). It is likely that the New Forest Committee will be replaced by a statutory body when the decision of giving the New Forest a national park status is made.

The figure below provides a summary of each organisation's responsibility in the administration of the New Forest (See Figure 5.2).

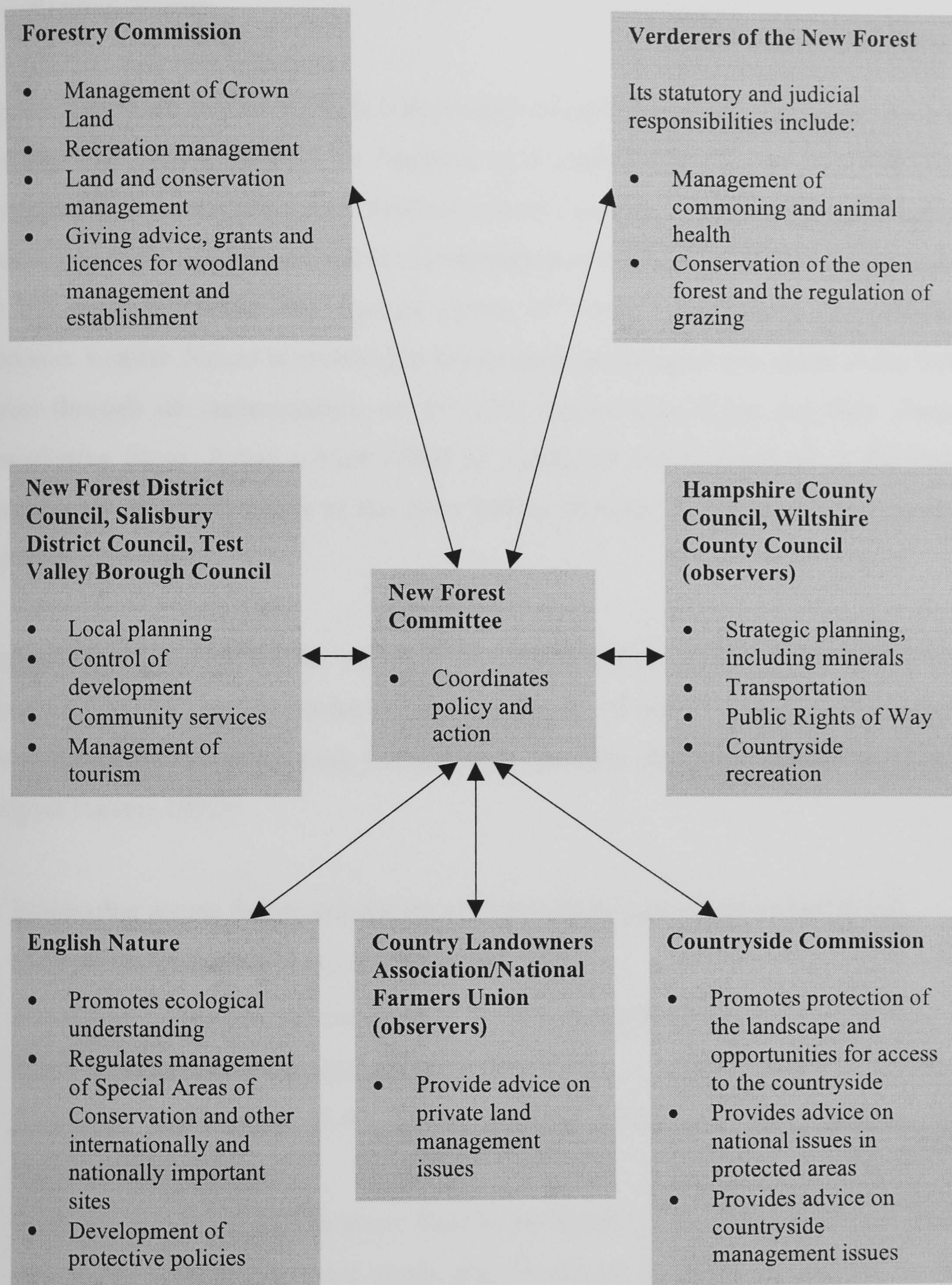


Figure 5. 2: The administration of the New Forest.

Source: Forestry Commission, 1999.

5.2.1 English Nature

English Nature advises on wildlife conservation to central and local governments and promotes the natural features in England. It is responsible for the establishment, management and maintenance of National Nature Reserves, the promotion of Sites of Special Scientific Interest and the recommendation of Special Protection Areas under the EC Birds Directive and Special Areas of Conservation under the Habitats Directive. English Nature is involved in the strategic planning of recreation in the New Forest through its representation on the New Forest Committee and New Forest Consultative Panel. It has a local office in Lyndhurst and is involved in the daily management of conservation in the New Forest Heritage Area (Land Management Research Unit, 1996).

English Nature's objective for access to countryside is to maximise the benefits of nature conservation and to ensure that the resources will not be degraded. Its Position Statement on Access and Nature Conservation indicates that the English Nature will (English Nature, 1992):

- Ensure that access fosters enjoyment and participation in nature conservation;
- Help people care for and enjoy natural heritage;
- Encourage understanding and support for the value and needs of the heritage in terms of protection and management;
- Encourage appreciation of the special qualities of national nature reserves and marine nature reserves;
- Facilitate access on foot to areas directly managed by the English Nature where compatible with management needs and the natural qualities are not put at risk. Access may be managed on a seasonal or zoned basis in order to protect sensitive wildlife and natural features, if damage is likely to occur or evident;
- Respect the use of existing rights of way on English Nature's land, although diversion is supported in exceptional cases;

- Recognise that when sites are in private ownership, the English Nature does not have power to require general access;
- Base decisions on sound research, and where the effects of access are uncertain, undertake management which avoid damages.

5.2.2 Administrative Organisations Responsible to the Provision of Tourism and Recreation Opportunities in the New Forest

5.2.2.1 Forestry Commission

The Forestry Commission, as the central government authority responsible for the management of the Crown Lands of the New Forest, states that subject to considerations of wildlife protection, access to the woodlands it manages is welcomed. It aims to increase visitors' enjoyment of the site. The Commission's recreation policy includes (Land Management Research Unit, 1996):

- Welcoming people on foot to all its woodlands, subject to considerations of safety, wildlife conservation and legal constraints that affect the land;
- Aiming to make its woodlands attractive to look at and to visit;
- Training its staff to recognise and satisfy visitors' needs;
- Providing information to visitors;
- Working with other agencies to develop the potential of its woodlands to support tourism;
- Improving its woodlands by providing simple car parks, footpaths and tracks, and taking account of visitors' needs;
- Providing a forest centre, café or shop where the woodland is particularly popular in order to enhance visitors' enjoyment;
- Providing forest holidays for people who wish to stay in the site, whether in caravan, cottage, forest cabin, or under canvas;
- Cooperating with other agencies to promote particular forest sports and activities that can be pursued in harmony with the needs of other visitors;

- Helping all people, especially the youngsters, to foster their awareness, understanding and enjoyment of the Forest.

Moreover, the Forestry Commission's management of recreation, subject to the agreement of the Verderers, includes the provision of (Land Management Research Unit, 1996):

- Accommodation for visitors;
- Camping and caravan sites, and managing these sites;
- Places for meals and refreshments;
- Picnic sites, viewpoint stances, routes for nature study and footpaths;
- Information and display centres.

In some of the campsites managed by the Forestry Commission, guided walks are provided between summer school holidays (mid July to end of August). Such activities were not available until the recent years due to the shortage of staff. Since the Forestry Commission started employing five part-time seasonal rangers, not only the duties of providing interpretation such as leading guided walks and staffing the mobile Information Booth in Bolderwood car park are achieved, the seasonal rangers also patrol the New Forest on bikes and offer assistance to visitors they encountered along the tracks. In 2001, 56 two-hour long guided walks were provided in five campsites, of which, 43 were led by the seasonal rangers. The estimated number of visitors with whom the seasonal rangers engaged on cycle routes, car parks, campsites, deer sanctuary (deer viewing platform) and the mobile Information Booth in Bolderwood car park was approaching 20,000 in 2001 (Forestry Commission 2002a, 2002b).

5.2.2.2 New Forest District Council

The New Forest District Council is also directly involved in the management of tourism in the New Forest, as most of the New Forest Heritage Area lies within the District. One of the District policies emphasises on the promotion of improved tourism

information at unmanned spots within tourism focal points (Land Management Research Unit, 1996). In other words, these various administration organisations share the same viewpoint in terms of the management of tourism activities in the site, that is, the New Forest is a unique space, where balancing conservation, tourism and other economical activities is essential. Also, visitor needs should be satisfied and providing information to visitors is necessary in order to enhance their enjoyment of the site. In fact, the New Forest District Council stresses that the rule of “Forest first” should always apply to ensure the sustainable use of the New Forest resources for developing tourism activities (New Forest District Council, 1998).

The New Forest District Council introduces 9 visitor codes relating to tourism activity in the site:

- Road: speed limit of 40 mph on unfenced roads in the New Forest
- Access: walking on designated footpath or tracks to reduce disturbance to wildlife
- Parking: parking in designated car parks instead of parking on roadside to reduce traffic congestion
- Cycling: cycling on designated cycle tracks, to give way to walkers and horse riders, and to control cycling speed
- Dogs: pets should be under control and dogs should be on lead to reduce disturbance on wild animals and cattle
- Fire: no picnic or campfire. There are 2 barbecue sites provided by the Forestry Commission and can be booked in advance
- Litter: litter should be placed in bins provided or taken home
- Car park thieves: cars parked in car parks should be locked at all times to prevent breaking in by thieves
- Do not feed/approach animals: animal feeding is prohibited, and approaching wildlife may be dangerous

These codes aim to increase visitors’ awareness of their activities, so they will conduct more appropriate behaviour during their visits to the New Forest. They are included in

printed materials such as guidebooks and site maps, and they are also placed on signs, information bulletin boards, on the gates of walks and cycle tracks, and painted on the road surface (the speed limit of 40 mph).

The greatest challenge in the management of the New Forest in the future is more than the restoration of its ecological system – the large number of visitors to the New Forest and the sheer pressure they place upon the resources has already slowed down the process of natural regeneration. For instance, campsites adjacent to Ancient and Ornamental Woodlands or large car parks arouse safety concerns and had led to the lopping even felling of old trees, and trampling and its outcome of soil compaction reduced the sensitive mosses and lichens. The most publicised case might be the Hollands Wood campsite of six hundred pitches and is situated in the Ancient and Ornamental Woodlands. Although the Forestry Commission intended to relocate the campsites to a new site, the New Park, just across the road, the oppositions are strong, as the New Park is the venue for the New Forest Show and provides car parking spaces for the large number of participants. Thus, seeking a balance between the management and protection of the New Forest resources and the provision of recreation opportunities to visitors is a task that will not be easy but needs to be achieved.

5.3 TOURISM IN THE NEW FOREST

Although the New Forest had always been an area for pursuing recreational activities, it was not until in the 1960s when private car ownership and leisure time increased dramatically, that the New Forest became a popular tourism destination. Three decades ago, there was a population of eight million within two and a half hours' drive from the New Forest. Today the extension of the M3 and M27 motorways link the New Forest with over fifteen million people within one and a half hours' drive. Furthermore, the road network to and within the New Forest also provides convenient and comfortable access. For instance, the improved A31 links the New Forest with Greater London via the M3 and M27, and with the south coast of England via the

M27. Rail also connects the New Forest with southern towns such as Winchester, Southampton, Bournemouth, Dorchester and Weymouth. Nevertheless, private cars remain the main transportation mode that visitors use to come to the area (Forestry Commission, 2000, 2001a; Land Management Research Unit, 1996).

When the New Forest had just become a popular tourism destination in the 1960s, there was almost no restriction on vehicle access, parking and camping activities in the Crown Lands. Such access was recognised to cause long term damage on the New Forest landscape, and the Forestry Commission began a range of management strategies to protect the resources in the Crown Lands in the 1970s. The main principle of the management was to disperse visitors over the whole New Forest, and it is still the central part of the Forestry Commission's recreation management on the Crown Lands until now. These strategies include (Forestry Commission, 2001a):

- Limiting vehicle access to certain areas of the New Forest, and building car parks to restrict parking;
- Creating some areas of the New Forest more attractive by the provision of facilities such as toilets and self-guided walks;
- Restricting camping to designated areas.

In 1992, a speed limit of 40 mph was introduced on the unfenced roads across the New Forest to reduce animal casualties caused by speeding traffic (Forestry Commission and New Forest District Council, 1993). However, there had been little decreases in animal road kills and accidents until 1995. It is necessary to stress that the majority of the animal accidents occurred on the roads in the New Forest are caused by the local residents instead of visitors in the peak hours travelling to work and just after dusk (R, Wright; A, Climpson; personal communication, June, 2002).

Even though the New Forest Preamble was fenced together with major roads within in the 1960s, access within the New Forest remains convenient through a public road network. While cattle grids extend over roads to prevent animals wandering off

the Preambulation, very few access points into the Preambulation are controlled in terms of limiting various types of vehicles entering the Preambulation. Nonetheless, once inside the Preambulation, car-free areas are protected from vehicle access through the use of small posts, ditches, banks and log rails (Land Management Research Unit, 1996; Forestry Commission, 2001a).

The easy accessibility to and within the Forest contributes to the popularity of the site as a tourism destination. Unless constrained by the Forestry Commission byelaws, most of the areas in the New Forest are open to the public. Access on foot and by bicycles or horses is almost unlimited through a network of paths. Walking is the most popular activity undertaken by visitors. The New Forest is also ideal for carrying out activities such as cycling, picnicking, camping and horse riding. Marked footpaths and self-guided walks are designated and provided by the Forestry Commission at different locations in the New Forest. These footpaths are usually short or medium in length and some are accessible by wheelchairs and prams. There are also more difficult and longer walks across the New Forest which require equipment such as compass recommended in various guide books. Gravelled cycle routes (not yet connected as a network) offer visitors an alternative way for enjoying the New Forest. Bicycle hire is available in some villages in the New Forest such as Beaulieu, Burley and Brockenhurst.

The current recreational uses of the Crown Land include walking, cycling, horse riding and a wide range of other special recreational activities. The table below provides information of the activities, quantity and the management in the Crown Lands (See Table 5.4).

Table 5. 4: Main recreational uses of the Crown Lands.

Type of activity	Approximate quantity	Management
Walking, including dog walking	20 million visits per year	Forestry Commission policy of free access on foot
Horse riding	Unknown. 3,600 horses within the New Forest Heritage Area (1994 data)	Forestry Commission byelaws allow free access on horse in the New Forest
Cycling	Unknown	Forestry Commission policy of encouraging cycle access on marked cycle routes
Specialist recreation	1,100 permits issued per year	Permits to be obtained from the Forestry Commission with seasonal, locational and other restrictions applying. Activities include orienteering, model boats and aircraft, hunting, fishing, BBQ, Duke of Edinburgh awards, husky training, carriage driving
Other activities	900 permits issued per year	Permits to be obtained from the Forestry Commission with seasonal, locational and other restrictions applying. Activities include filming, car access to inclosures, military training, bee keeping.

Source: Forestry Commission, 2001a, 2001b.

5.3.1 General Information of the Tourism Activities in the New Forest

The recreational activities related facilities in the New Forest include Tourist Information Centres, car parks, walks, cycle tracks, and campsites. They are managed by various organisations, nonetheless, the facilities situated in the Crown Lands are provided and maintained by the Forestry Commission. Below is a list of facilities relating to recreational activities in the New Forest Heritage Area (See Table 5.5).

Table 5. 5: Inventory of recreation facilities.

Facility	Quantity	Management organisation
Car park with toilet	10	Forestry Commission
Car park	122	Forestry Commission
Marked walks	8 (15 km)	Forestry Commission
Marked cycle track	1 (sections of 200 km not yet connected as circular route)	Forestry Commission
BBQ site	2 (advanced booking from the Forestry Commission recommended)	Forestry Commission
Picnic site	33	Forestry Commission
Deer observation platform	2	Forestry Commission
Sport pitch	3	Forestry Commission
Golf Course	3	Forestry Commission
Cricket pitch	12	Forestry Commission
Campsites	10	Forestry Commission
Public information bulletin Boards	8	Forestry Commission
Mobile Information Booth	1 (Bolderwood)	Forestry Commission
Tourist Information Centres	4 (Lyndhurst is situated in the New Forest Heritage Area; Ringwood, Lymington and Fordingbridge are in New Forest District).	New Forest District Council and Southern Tourist Board
New Forest Museum	1 (Lyndhurst, the Lyndhurst TIC shares the same building with the New Forest Museum)	Ninth Century Trust

Source: Forestry Commission, 1998, 2001a, 2001b; New Forest District Council, 1998.

5.3.1.1 The usage of the New Forest for recreational purposes per annum

The New Forest is believed to be under high pressure of recreational demand. According to the research conducted by ECOTEC, more than seven million days were spent by visitors (ECOTEC Research and Consulting Ltd, 1992). Another research

project carried out by the Centre for Leisure Research and JMP Consultants Ltd. (1995), the "All Parks Visitor Survey," the visitor days were estimated of more than 6.5 million days. It is suggested that there may be bias in this research, as surveys were carried out in major tourism honey pots and the local residents' uses of the New Forest for recreational purposes may be underestimated in the ECOTEC research and the "All Parks Visitor Survey" (Land Management Research Unit, 1996).

The local residents, benefiting from the convenient accessibility to the New Forest from their residence, are less likely to stay overnight in the fee-charging accommodation. However, the frequencies of their uses of the New Forest for recreational purposes are believed to be much higher. The New Forest Sport and Recreation Study (Land Management Research Unit, 1996) suggests that the visits to the New Forest made by the local residents may be up to 18 million visits per year. It is necessary to point out that in the New Forest Sport and Recreation Study (Land management Research Unit), the "local users" was defined as people living within 30 minutes drive from the New Forest. Referring to Table 5.4, the Forestry Commission estimates as many as 20 millions visits per annum to carry out recreational walking in the site. It is believed the Forestry Commission's estimation is inclusive of local users.

5.3.1.2 Seasonality

There is little evidence of the precise seasonal fluctuations in tourism activities in the available secondary data. However, given the fact that the New Forest is easily accessible from Greater London and numerous cities and towns in the south of England, it would not be difficult to presume that visitor numbers would increase significantly at weekends, especially in summer months. Also, visitor numbers would be less in winter months due to the weather conditions, although these may have less effect on local residents in terms of their visits to the site. Long weekends, such as Easter, May and August bank holidays, and school half terms, visitor numbers are expected to be higher.

5.3.1.3 Visitors' geographical origins

Residents in South East of England are said to be the backbone of New Forest visitors' geographical origins (Forestry Commission, 2000, 2001a). The population in the Southern England had shown a significant growth between 1981 and 1991, and this development suggests that the New Forest is likely to be used as a destination by the residents in the surrounding regions (Land Management Research Unit, 1996). The research findings from the "All Parks Visitor Survey" (Centre for Leisure Research and JMP Consultants Ltd., 1995) also confirmed that the South East of England, including Greater London, followed by the South West of England, are home regions for up to 65 percent of the staying visitors of the New Forest. ECOTEC's research, too, indicates the New Forest visitors' geographical origins predominately are from the Southern England (ECOTEC Research and Consulting Ltd., 1992).

5.3.1.4 Composition of visitor groups

The most common visitor group composition was family groups, followed by friend groups and groups of family and friends together. Most frequently there were two people in a group to visit the New Forest, whilst four people were also common (Land Management Research Unit, 1996). According to the Forestry Commission's data, one quarter of the family groups include children. Moreover, the number of older family groups carrying out activities such as walking and cycling is increasing, because such activities are seen healthy and therefore are popular among this group (Forestry Commission, 2001a, 2001b).

5.3.1.5 On-site information source

The secondary data suggests that the source of information visitors used most often is the Tourist Information Centres, followed by information bulletin boards. Printed material such as leaflets and maps, as well as self-guided walks are also popular in the relevant locations. The use of these sources of information varies slightly among local

residents, excursionists and staying visitors. Local residents tend to use maps and bulletin boards more often, whilst excursionist prefers to use information bulletin boards and the Tourist Information Centres. Staying visitors, on the other hand, are more likely to use Tourist Information Centres, followed by bulletin boards and printed materials (Land Management Research Unit, 1996).

At present, the Forestry Commission operates a mobile information booth at Bolderwood car park in the summer months. The New Forest District Council funds and manages three Tourist Information Centres in the New Forest: Lyndhurst, Ringwood and Lymington. The Lyndhurst Tourist Information Centre, situated in the Lyndhurst village in the heart of the New Forest Heritage Area and accessible via the A35 and A31, is open all year round and serves as an important point for information collection. The Ringwood and Lymington Tourist Information Centres are open from Easter to September. Fordingbridge, bordered with the New Forest Heritage Area in the North West, also has a Tourist Information Centre, which is open from Easter to September. It is co-funded by the Parish and local commercial bodies but is managed by the Southern Tourist Board (New Forest District Council, 1998).

5.3.1.6 Accommodation

The types of accommodation in the New Forest can be divided into three main groups, namely serviced accommodation, self-catering, and camping/caravan sites (See Table 5.6). Camping and caravanning in the New Forest is restricted to the designated sites only. Currently the Forestry Commission manages ten campsites in the Crown Lands in the New Forest of 3,370 pitches (four people per pitch). There are another three overspill sites with minimal facilities operating at peak periods at Easter, May and August Bank Holidays, which, in total, make up five thousand pitches (Forestry Commission, 1995). The maximum bed-spaces of these sites managed by the Forestry Commission therefore are 20,000. Most of these campsites operate from the end of March to early October, with only one site open all year round. There are other privately owned campsites, but are usually for membership holders only.

Table 5. 6: Accommodation type and capacities in the New Forest.

Type of accommodation	Capacities	Percentage
Serviced accommodation, including hotels, bed and breakfast	3,610	14%
Self-catering, including holiday flats, farm cottages, holiday parks	1,280	5%
Camp/caravan sites	20,517	80%
Other	327	1%
Total	25,734	100%

Source: ECOTEC Research and Consulting Ltd., 1992.

The popularity of camping and caravanning has shown a steady increase since 1950s (Land Management Research Unit, 1996). The provision and management of campsites in designated areas meant that the resources sensitive or fragile areas can be protected from unrestrained camping activities. However, some campsites managed by the Forestry Commission are situated in the Ancient and Ornamental Woodlands, and one of them, the Hollands Wood, is a large campsite with full facilities to cater for campers' needs. The proposal of the development of New Park campsite of up to more than nine hundred pitches and the closure of three existing campsites, Hollands Wood, Long Beech and Ocknell, has received strong oppositions.

Reasons for the removal of these campsites to the New Park are mainly for environmental protection of the Ancient and Ornamental Woodlands. As the New Forest is a designated Special Area of Conservation, the high concentration of people, vehicle and camping equipment in the Ancient and Ornamental Woodlands is incompatible with the woodland management and protection. Moreover, the felling of overhung tree branches in the campsites due to health and safety concerns is against of idea of the restoration of the woodlands (English Nature, 2001). However, the participants of the New Forest Show oppose the proposal of campsite removal because the New Park is the venue for the Show and provides parking space of 30,000 cars (New Forest Online, 2002). Furthermore, local communities concern that the removal of the campsites would bring economic downturn to their business.

5.3.1.7 Reasons for visiting the New Forest

The New Forest serves as a popular tourism destination in the South of England. It is necessary, therefore, to establish what factors and characteristics give rise to this popularity. According to the New Forest Sport and Recreation Study (Land Management Research Unit, 1996), the results show that more than forty percent of the sample suggested that the New Forest scenery is the reason for their visit. Other commonly expressed reasons included “peace and quiet”, “the animals in the New Forest” and “because it is the New Forest”. Interestingly, the ease of access to the New Forest was also one of the main reasons why the sampled visitors came to the site. This fact may be explained by the convenient links between motorway network and local road system, and the location of the New Forest, which is situated in the densely populated South of England.

5.3.2 Currently Known Negative Impacts Caused by Tourism Activities in the New Forest

Although some activities such as motor rallying which can have major negative impacts on habitats is restricted in the New Forest, the site still experiences effects resulting from tourism activities and other human activities. For example:

- Direct disturbance to wildlife as well as through the loss and the alteration of vegetation;
- Incompatibility between various activities, such as tourism and forestry, and camping and resource conservation;
- Damage to landscape and resources, including damage to vegetation, soil erosion, gullyng and altered drainage ability of soil.

Popular activities including walking, cycling and horse riding that cause trampling of vegetation, can lead to increasingly loosened soil. Further, vegetation roots may be exposed when the loosened soil loses its binding ability. On slopes, loosened soil gets

washed off by rain or gets blown off during dry months. Cyclists and horse riders may widen tracks by cycling and riding on the edge of existing tracks. Additionally, recreational needs sometimes lead to the removal of the New Forest resources. For instance, some large, ancient trees are seen as a potential hazard to visitor safety. Except for the previous cited example of campsites located in the Ancient and Ornamental Woodlands, in some tourism honey-pots such as Rufus Stone and Blackwater, trees grow close to well used routes, which, in turn, lead to the felling of the trees. Therefore, the conflict between resource protection and tourism activities is severe. The construction of some car parks and other facilities also lead to negative effects on habitats, as these facilities are located in resource sensitive areas (Land Management Research Unit, 1996). The Forestry Commission regularly assesses the car parks in the Crown Lands, and those car parks adjacent to sensitive locations are gradually closing down in order to reduce impacts on the resources. The number of car parks has decreased from 150 to 132 in recent years (Forestry Commission, 2001a).

The Forestry Commission recognises the need for careful planning and management of the various activities to ensure visitor safety and enjoyment, resource conservation, as well as the operation of economic exercises such as forestry in the Crown Lands. Dividing the New Forest into different zones may be one way of managing these very different activities. The Forestry Commission decided to keep cars out of the forest area, to build car parks around the edge of the forest, and to lay out marked footpaths (Forestry Commission, 2002c). However, the size and openness of the New Forest makes zoning method difficult to apply. Zoning often involves temporary or indefinite restriction on access and particular activities, to enable resources to recover from inappropriate use. The physical characteristics of the New Forest means that unless visitors voluntarily comply with the restrictions, zoning is unlikely to be an effective management tool. Using interpretation to persuade visitors to abide by these restrictions may be of use, but, the interpretation information needs to reach to as many visitors as possible.

5.3.3 The Implications of the Characters of the New Forest to the Study of the Visitor Management in Resource Sensitive Tourism Destinations

Situated in the densely populated Southern England, the resources in the New Forest inevitably experience some form of negative impacts as a result of the development of tourism. The historical significance of the New Forest makes the site a valuable natural asset, and the natural resources that still exist at the site suggest the need for protecting the area while attempting to maintain a balance between resource protection and providing for recreation opportunities and forestry activities. In such a situation, visitor management should play a critical role in the successful management of the site.

The New Forest District Council and the Forestry Commission have been gradually introducing management actions to tackle the negative impacts resulting from visitor activities. These actions include zoning, provision of tourism facilities such as walks, cycle tracks, car parks and campsites. Also, the speed limit of 40 mph within the site has been introduced to minimise traffic incidents involving the wildlife of the New Forest. However, these techniques represent the hard approach to visitor management. In other words, visitors' awareness and understanding of the significance of the New Forest is not increased through the use of this hard approach. The researcher feels that the available soft approach of visitor management at the site could be improved. For instance, the visitor codes used in the New Forest is more "regulation" oriented in terms of the undertone of these codes. As discussed in Chapter Two, visitor codes focus on increasing visitors' awareness of the destination, even though they are not law enforced. The "regulation" undertone of the New Forest visitor codes may fail to enhance visitors' understanding of the sensitivity of the resources, and the frequency of appearance of some of the codes is so low that visitors may not know such codes are in place.

Furthermore, although interpretive information is available from printed materials, only a few guided activities and interpretive signage offering visitors first-hand on-

the-spot experience of the resources are provided by the managing agencies. Although self-guided walks are gravelled and easily accessible to most of the visitors, visitors are less likely to “learn” about the features and aspects about the New Forest during their visits. The significance of the New Forest may not be understood and appreciated by the visitors because they are not aware of it. In other words, their experiences of undertaking outdoor activities in the historically important New Forest is not much different to carrying out the same activities in their local parks, since the experiences visitors perceive are limited to “a day out and do some activities”.

The provision of tourism facilities such as car parks can effectively control visitors’ volume and visitor flow. The Forestry Commission constantly assesses the size and location of the car parks in the Crown Lands of the New Forest and ensures that sensitive resources are not disturbed by the visitors. Car parks, in addition to be used as a tool to manage visitors’ activities, can also be used to generate income by charging fees for the use of such facilities. The financial gain, in turn, can be used to fund resource protection, research and provision of interpretation. It is necessary to plan carefully if such a car park charge scheme is to be implemented, because visitors are likely to roam around the site during their stay, hence the car park charges cannot be based on “per ticket per car park” but on a day-pass basis.

It is suggested that most of the road kills are caused by the local residents (R, Wright; A, Climpson; personal communication, June, 2002). When the visitor survey was carried out in 1999, the researcher found out that many New Forest District residents did not observe the 40-mph speed limit (they have special parking permits that are placed on the windscreen thus easily recognisable). On the other hand, visitors tend to drive slowly because they are enjoying the scenery and the sightings of wildlife. This points out that local residents’ familiarity of the site may increase their tendency of neglecting some of the applied rules. They know there is no speed camera fitted to catch speeding, and they are familiar with the direction. Thus, they are more likely to drive at a high speed and responsible for most of the road kill accidents. Local residents’ familiarity may also affect their behaviour in the site when they come to

carry out their recreational activities. They may be more likely to enter restricted zones that are not shown in site maps to prevent visitors' disturbance upon the resources. Because they know the area well, they may neglect the restrictions, and their frequencies of using the site for recreational purposes are higher, local residents may cause more negative impacts than the non-local visitors.

The New Forest is a sensitive natural resource that is used by visitors for quite a wide range of tourism and recreational activities. This combined with the fact that there is a wide range of activities and large number of visitors at the site make it a good testing ground for the subject of this thesis. Finally, the proximity of the New Forest to the University of Bournemouth also makes the site a convenient case study for this research. Interviews could be conducted with visitors on a daily basis without incurring inordinate travel costs.

SUMMARY

The New Forest has always been a popular site and it has attracted a large number of visitors for decades. Increasingly, the pressure from tourism and other activities has led to observable impacts upon resources in the New Forest. As the size of the site covers a large area with different landscapes, flora and fauna, the managing organisations need not only to work together, but also to apply the principle of "Forest First", in order to achieve the goals of resource conservation and visitor enjoyment. It is difficult for the managing authorities to restrict visitors from entering the New Forest due to the easy accessibility by motor vehicles. However, the necessary management and resource conservation methods should be the priority instead of the development of tourism. In addition, using interpretation to educate visitors on the sensitivity of the New Forest cultural and natural heritage and appropriate activities to undertake is also essential for sustaining the resources for long-term use of the New Forest. Even though various Tourist Information Centres, Information Bulletin Boards and other types of interpretive materials serve visitors as on-site information sources, these interpretive media need to reach as many visitors as possible to maximise their

effectiveness in educating visitors. Hard visitor management techniques such as applying rules and regulations, resource hardening and alteration, although restrict visitors' activities in the site and may be effective to modify undesired visitor behaviour "by force", they may not be sufficient to enhance visitors' understanding of the site. Using soft visitor management techniques, especially interpretation, to support the hard management approach may be effective in increasing visitors' understanding and awareness of the sensitivity of the site, and in turn, visitors may be more willingly to modify their behaviour to be more appropriate.

CHAPTER SIX

RESEARCH METHODOLOGY

INTRODUCTION

In the previous chapters, it has been demonstrated that there is clear and strong evidence of a link between effective communication with visitors and successful visitor management. The literature also suggests that tourism destinations can be managed in a more effective and sustainable manner if the strategies of visitor management are implemented, because such strategies can help to modify visitors' behaviour to be more appropriate and desirable. This research of the New Forest visitors intends to identify in what media visitors prefer to receive their information, and whether the increased interpretive information with respect to environmental issues about the research site can foster the sampled visitors' intentions to modify their behaviour to be more environmentally friendly. If a positive relationship between a visitor's receiving of information and their intentions of behavioural formation can be identified, such a finding would benefit the managing authorities of the New Forest as well as other tourism destinations in the design and implementation of visitor management strategies.

This chapter discusses the research questions and methodology used in this research. The background of the research, including the reasons for choosing the New Forest as the research site, research aims and hypotheses are outlined, as they form the framework of the research. Following this, the possible research methods that could have been applied to the research are examined, and the advantages and weaknesses of these research methods are discussed. Furthermore, the chapter presents the case that supports the chosen research method, that is, interviewer-completion face-to-face structured interviews with visitors in the New Forest. Moreover, secondary data

collection and the questionnaire design are examined, as well as the procedure used for piloting this research.

The information from the available secondary data and the experience gained from the pilot study formed the planning of the visitor survey, including the survey locations, approach and monthly sample numbers. Additionally, the problems that arose during the survey are discussed. This chapter ends by examining the limitations of the research, and the possible research approach to eliminate such limitations.

6.1 THE PHILOSOPHY OF RESEARCH METHODOLOGY

6.1.1 Concept and Approaches of Research

As Ryan (1995, p. 2) points out, that "Good research is an indispensable aid to understanding phenomenon in order to act more effectively. It is inherently practical as it seeks to explain the relationship between apparently connected activities, and the nature of that relationship." Furthermore, Finn et al (2000, p. xv) suggest that:

"Research is about enquiry, about discovery, about revealing something that was previously unknown or testing the validity of the existing knowledge."

Many researchers emphasise that the philosophy of research is that it requires a systematic and objective approach, and the aim of a research is to find the solution for a specific problem (Davis and Consenza, 1988; Kerlinger, 1986; Kumar, 1996; Leedy, 1985; Mitra and Lankford, 1999; Ryan, 1995; Sekaran, 1992; Zikmund, 1991). Research is a careful, patient and methodical inquiry carried out according to certain rules, guidelines or accepted practices (Sommer and Sommer, 1986). Preece (1994) suggests that a research activity should be carried out within a system of knowledge, and the research should be probing the knowledge system and aiming to increase the knowledge base. Preece's (1994) concept of research is broader and more conclusive,

especially when the research subject is of social science. Preece (1994, p. 18) thinks that:

“The increase of knowledge may be something entirely new and original or, more commonly, it may consist of checking, testing, expanding and refining ideas which are themselves still provisional. In particular, research should continually question the nature of knowledge itself, what it is and how it is known”.

Tuckman (1977) suggests that there are five characteristics of a research project: it is systematic, logical, empirical, reductive and replicable. The research is accomplished through a systematic approach of identifying problems, designing and implementing research methods prior to drawing conclusion. The research procedure is logical and therefore other researchers are able to review the methods, findings and discussion and to evaluate the conclusion. The data is collected in order to explore the research issues and solve the problem, and the data collected from numerous research subjects is carefully analysed in order to form generalised statements about the research issues or phenomenon. Therefore, research is empirical and reductive. The research process is recorded, enabling other researchers to repeat the research process to test the findings or to develop further research from the previous research, that is replicable characteristics of research project.

Research should be conducted systemically and is intended to increase knowledge or to find a solution to resolve a problematic issue. Irrespective of the aims of research, it is vital that the researcher has a sound understanding of the underlying theories that provide the framework for the research. Research requires theories as a framework for analysing and interpreting its findings, and these findings are used to review, modify and challenge the theory (Finn et al, 2000). There are two approaches of research methodology: deductive and inductive approaches.

Deductive research methodology uses a theory-testing approach. When this approach is adopted for a research project, the researcher starts with a theory, and collects empirical data and analyses it with a vision either to accept or to refute the theory. Deductive approach involves identifying the key concepts of a theory, then a series of hypotheses are tested to see if the data supports or rejects the hypotheses. The figure below shows the process of deductive approach of research methodology (See Figure 6.1).

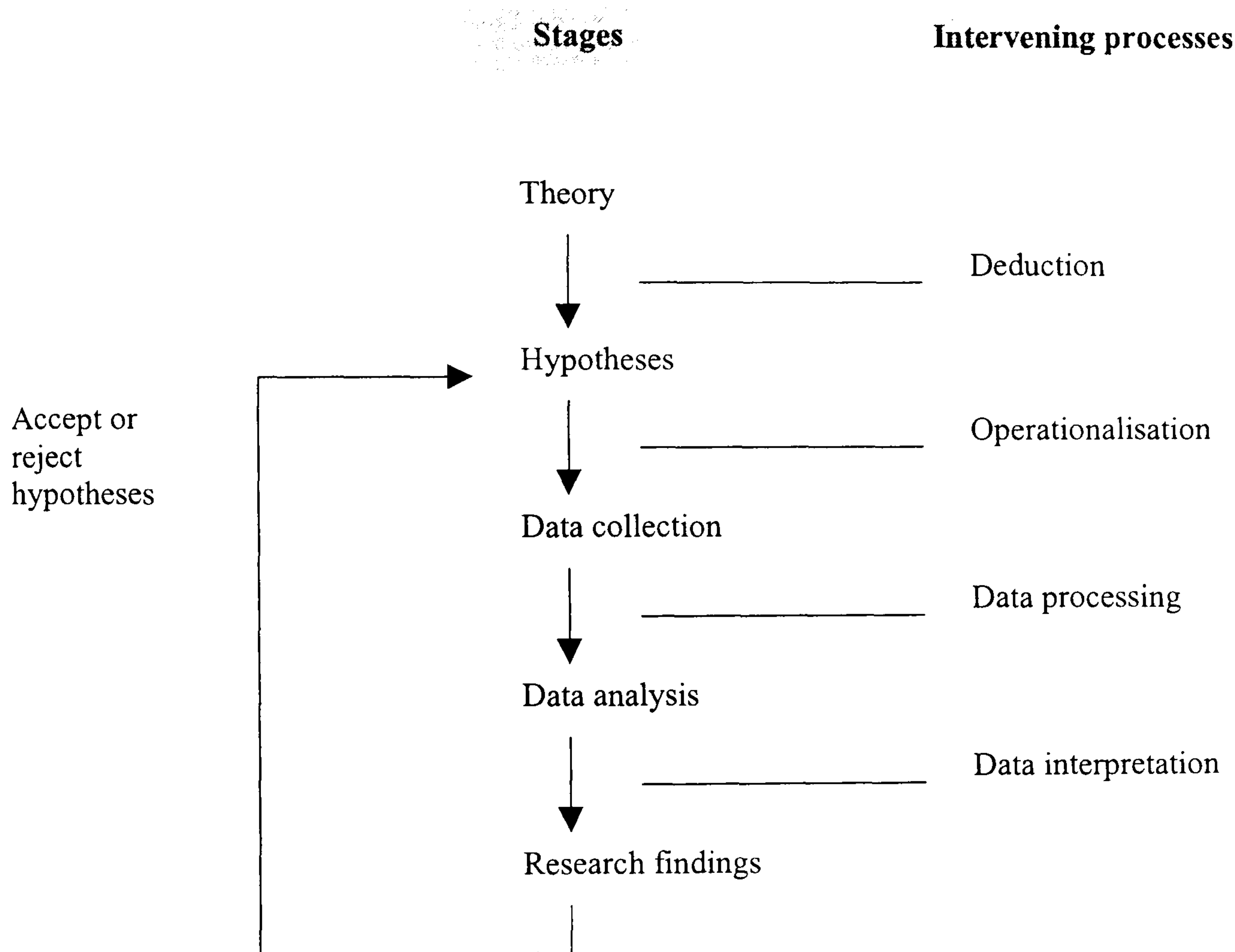


Figure 6. 1: The structure of theory-test approach of research methodology.

Source: Finn et al, 2000.

According to Neuman (2000, p. 61):

“Researcher who adopt a more deductive approach use theory to guide the design of a study and the interpretation of results. They refute, extend, or modify the theory on the basis of results.”

In contrast to the deductive approach, the inductive approach involves researching a specific aspect of a research subject and attempting to develop a theory or theories from the results. In other words, the theory is the outcome of inductive approach.

6.1.2 Process of Research

Research process can be described as a series of steps, beginning with the formulation of a particular problem, and ending the process with a report (McDaniel Jr. and Gates, 1993). Ryan (1995) suggests the steps of research process as follows:

- Problem identification and formulation;
- Assessment of the value (i.e., the cost) of research process;
- Development of the research proposal;
- Development of the research design;
- Determination of data collection methods and procedures;
- Determination of data analysis procedures;
- Evaluation of results;
- Final report, including results, evaluation and recommendations.

Ryan (1995) suggests that the research process is not always sequential but sometimes interdependent. For instance, at the initial stage of problem identification and formulation, the methods to be used to collect data is usually being indicated. However, if the data collection methods are too costly, then the problem may be redefined in such a way that some information is collected consistent with the suitable data collection methods. In other words, the methods selected are dependent on the formulation of the problem, but it is not always sequential to the problem. Different methods generate different data, different cost of collection of the data, and in turn, the relevance of the data helps to formulate research design (See Figure 6.2).

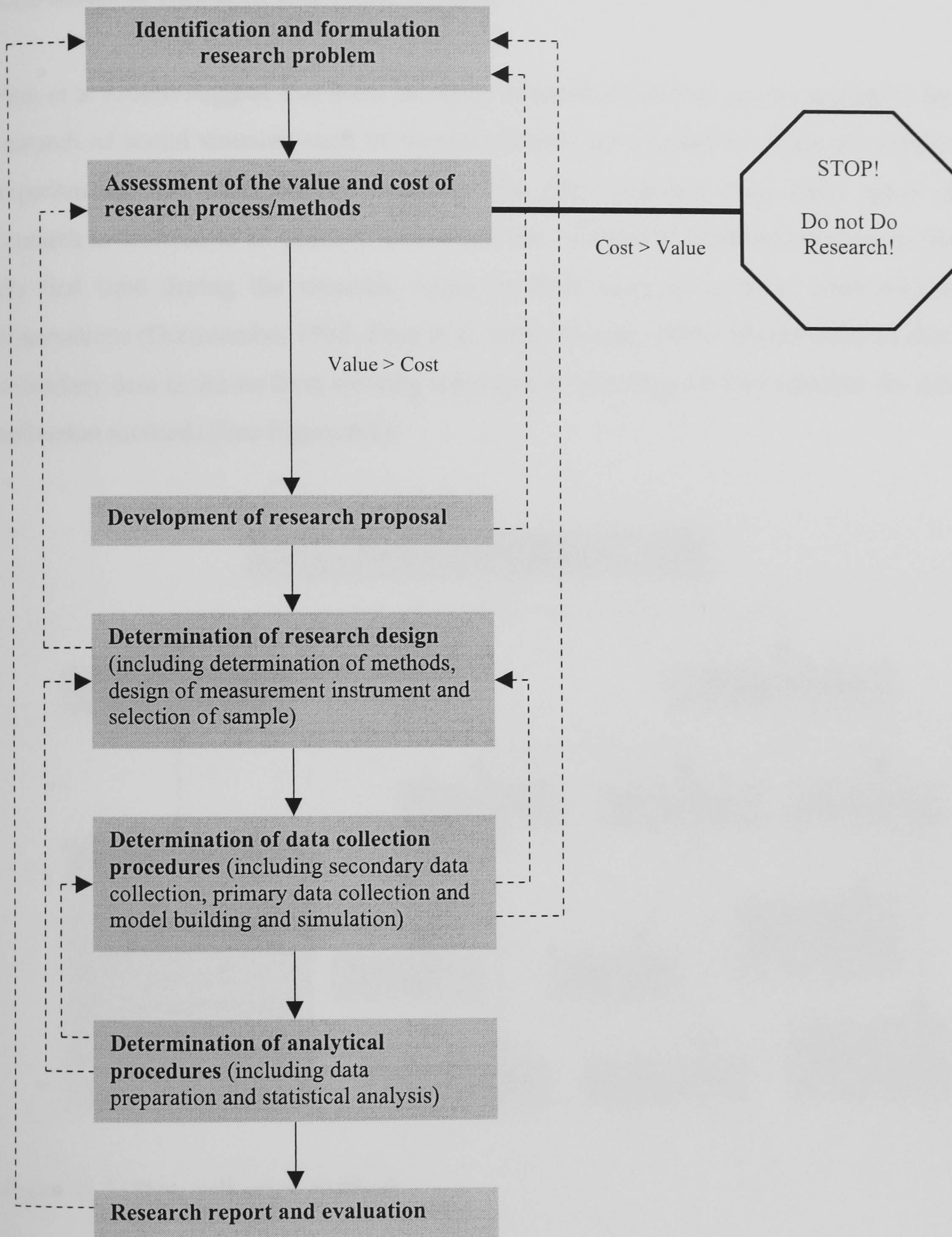


Figure 6. 2: The research process.

Source: Ryan, 1995.

6.1.3 Styles of Research and Types of Data

Finn et al (2000) suggest that there are three research styles that can be applied to the research of social sciences such as tourism, leisure and recreation. They are survey, experimental and ethnographic methods. The data collected from these types of research is referred to as primary data, since the information collected is done so for the first time during the research, using methods such as surveys, interviews or observations (Denscombe, 1998; Finn et al, 2000; Kumar, 1996). Unlike primary data, secondary data is drawn from existing information. The figure below outlines the data collection methods (See Figure 6.3).

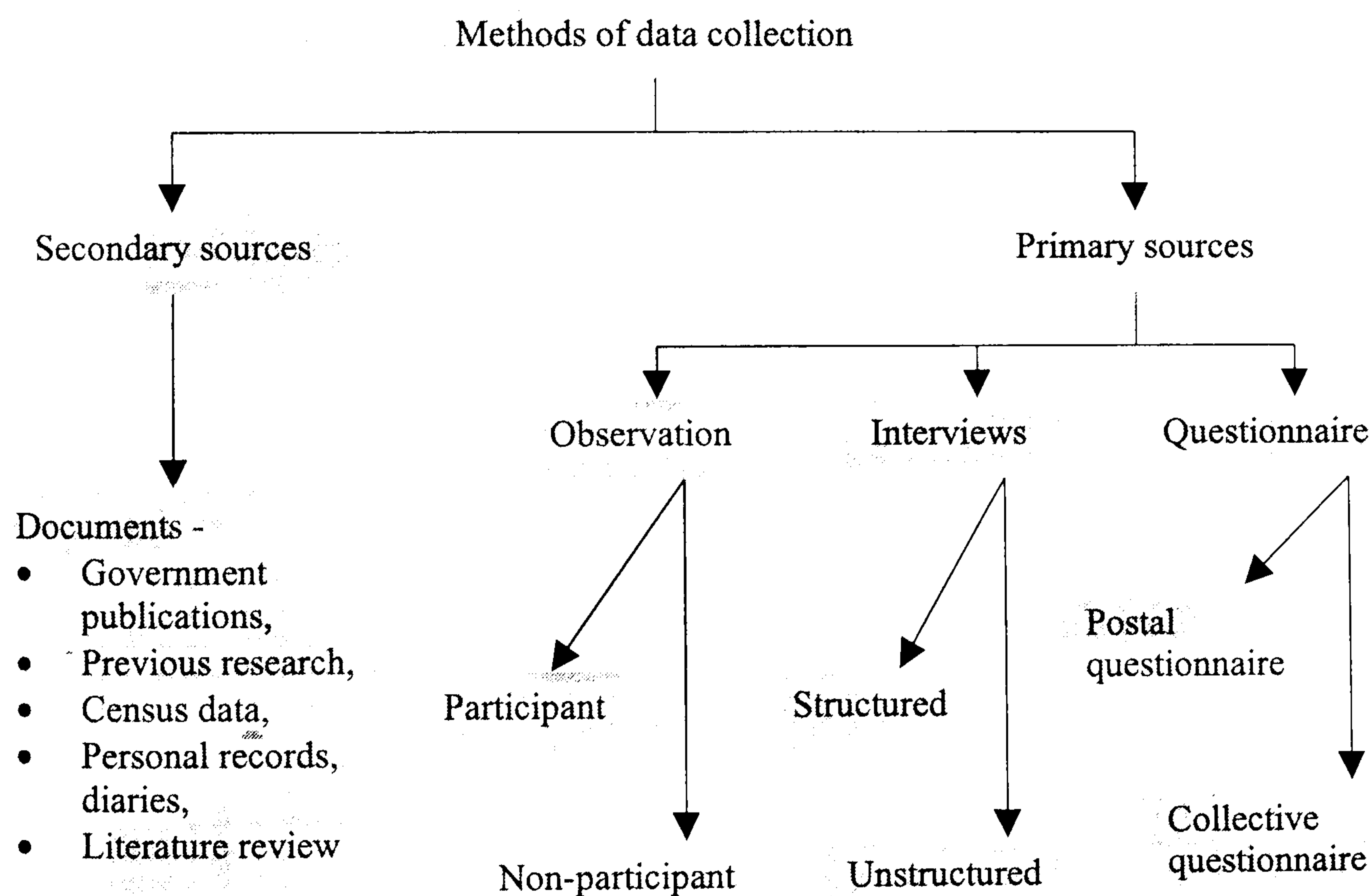


Figure 6. 3: Data collection methods.

Source: Derived from Kumar, 1996.

Research involving survey methods requires a sample of respondents to reply to a number of questions that are specifically designed and are relevant to the research. Some of the researchers refer to this type of research method “questionnaire method”, because a questionnaire is used as the instrument to collect information from the

samples (Chisnall, 1992; Denscombe, 1998). The data collected from the survey can be used to compare the similarity and/or the differences among those sampled individuals. The main advantage of using survey to carry out a research activity is that it allows the researcher to collect a large amount of information in a fairly short period of time. Survey is the most used research style used by tourism and leisure researchers.

Experimental research involves testing variables under controlled conditions to measure the effects of one factor upon another. It is generally designed so that the independent variable is manipulated to find out its impact on another variable (dependent variable). Usually, such research is carried out by setting up a controlled group and an experimental group, and then comparing the differences between the two groups after one of them has been treated differently. In tourism research this style of research is less frequently employed.

The ethnographic style of research investigates and observes a culture in its own setting. It studies the complexity of social interaction in great depth, and this style of research is focused on the understanding of the meanings the participants attribute to these interactions (Marshall and Rossman, 1999). The main strength of the ethnographic research method is its naturalism, however, it is also time consuming to carry out the observation. The data collected from the researcher's observation tends to be qualitative in nature. An example of this style of research is that an ethnographer sits in an office of a firm and observes the interactions between the employees and the culture of the office. This style of research is not often used in the research of tourism and recreation, but can be seen in the research of the employees of the tourism and hospitality industries, for instance, staff's job satisfaction in the work place.

6.2. METHODS OF DATA COLLECTION

Most of the research is administered by using a combination of both primary and secondary data collection. According to the purposes and aims of a specific research

topic, primary data collection can be carried out either by one or some of the following techniques: observation, experimentation and questionnaires. Secondary data shows the researcher the available existing information of a particular issue. It also identifies the differences between then and the current state of knowledge of such issue (Denscombe, 1998). Thus, without the review of the existing data prior to the collecting of primary data, the researcher's time and resources would have been unnecessarily wasted, and the information collected may be of limited value.

6.2.1 Primary Data Collection Methods

Primary data collection approaches can be divided into two main categories, namely quantitative and qualitative methods. As their names suggest, quantitative methods tend to involve a large number of people, whereas qualitative methods tend to focus upon the richness and depth of the information intended to collect. Punch (1998) refers to quantitative research as empirical research, where the data collected usually is the form of numbers, and the qualitative data is not in the form of numbers. Researchers distinguishes the differences between quantitative and qualitative data collection techniques based on their characteristics (Henderson, 1990; McDaniel Jr. and Gates, 1993) (See Table 6.1). It is unlikely to identify one method as being superior than another, as different research projects require various research methods in order to obtain necessary data.

Table 6. 1: The characteristics of quantitative and qualitative data collection techniques.

	Quantitative technique	Qualitative technique
Types of questions	Limited probing	Probing
Design characteristics	Pre-ordinate design	Emergent design
Sample size	Large	Small
Style of data	Measurement, using numbers	Meaning, using words
Information per respondent	Varies	Much
Administration	Fewer special skills required	Requires interviewer with special skills
Setting	Impersonal, controlled, manipulative	Natural, interactive, personal
Type of analysis	Statistical, summarisation	Subjective, interpretive
Hardware	Questionnaires, computers, printouts	Tape recorders, projection devices, video, pictures,
Ability to replicate	High	Low
Relationship with theory and approach of research	Confirming theory, deductive approach	Developing theory, inductive approach
Process and procedure	Rational	Intuitive
Training of the researcher	Statistics, decision models, decision support systems, computer programming, marketing, marketing research	Psychology, sociology, social psychology, consumer behaviour, marketing, marketing research
Example	Questionnaire survey	Ethnographer's observation

Source: Derived from Henderson, 1990; McDaniel Jr. and Gates, 1993.

6.2.1.1 Quantitative data collection methods

Quantitative methods for data collection are commonly used in the social sciences. In general, quantitative methods adopt a deductive research approach. They commence with theories about a particular research topic, and from which hypotheses are derived. Data are collected either by questionnaire survey or by interviewing participants, and analysed using statistical computer packages. The findings are tested to identify whether they support or reject the hypotheses (See Figure 6.1) (Jennings, 2001). In tourism research, survey methods are arguably the most important sources of information (Smith, 1995). Survey processes involve asking participants a series of

questions by face-to-face interviews, telephone interviews or post (participant self-administered), and the series of questions used in a survey research are printed in the form of a questionnaire. Survey research allows a researcher to gather information from a larger number of respondents throughout a larger geographical scale. This is especially the case of postal questionnaire surveys (Veal, 1997). One objective of survey research is to obtain data that are representative of the population, that is, the responses of the sample can be generalised to a larger population. Therefore, the process of sampling from its population is critical to the reliability of research (Finn et al, 2000).

In quantitative research, the research instrument is a pre-determined and finely tuned data collection tool, which allows little flexibility, such as a questionnaire (Brannen, 1992). Questionnaire and interview are two commonly used methods in research into social science subjects. Thus, the appropriate design of questionnaire and interview technique is essential in implementing a survey research. Piloting the questionnaire is important prior to the carrying out of the final survey as it enables the researcher to check the research instrument (the questionnaire) in terms of wording, layout and sequence of questions, it also helps the researcher familiarise with the research process (Jennings, 2001).

It is worth noting that questionnaires can be completed by either the respondents themselves, or by the researcher. When completed by the interviewer, the questionnaire is read out to the respondents and the researcher records the answers on to the questionnaire. On the other hand, in respondent-completion questionnaire survey, the respondents read and complete the questionnaire, and return it to the researcher, or the researcher collects it from the respondents. It is suggested that despite the survey methods, self-completion questionnaires should be largely close-ended questions, as respondents tend to neglect open questions (Veal, 1997). Both techniques have their advantages and disadvantages, and whichever to adopt for a research project is determined by the particular nature of the research and the

availability of time and budget. The table below is a comparison of these two questionnaire completion methods (See Table 6.2).

Table 6. 2: Researcher- versus Respondent-completion questionnaire survey.

	Interviewer completion	Respondent completion
Advantages	<ul style="list-style-type: none"> • Higher Accuracy • Higher response rate • More complete answers • Questionnaire design does not have to be the main concern 	<ul style="list-style-type: none"> • Cheaper • Quicker • Respondents remain relatively anonymous
Disadvantages	<ul style="list-style-type: none"> • Higher cost • Less anonymity from respondents' view point 	<ul style="list-style-type: none"> • Uneven response • Incomplete response • Risk of frivolous responses and/or contradicting responses • More care is needed in questionnaire design and presentation

Source: Derived from Veal, 1997.

Questionnaire-based surveys and interviews often rely upon the respondents' own ability of recall their past experiences, perceptions, or attitudes. Furthermore, in a questionnaire-based survey or interview, a respondent is given limited options to choose from. Therefore, if the research topic involves complicated concepts, the use of questionnaire may not be the ideal research method. Additionally, if the design of a questionnaire is in a leading or over-simplified format, the reliability of the research findings can be dubious. Moreover, if the social climate in the research site is not open enough, particularly when the questions are sensitive, it is likely that respondents will not answer them honestly. Another possible situation is that a respondent might exaggerate their experiences, perceptions, engagement, or interests related to the issues in questionnaires, as they want to be helpful to the researcher. Hence, although questionnaire surveys usually are quantitative in nature, it does not necessarily to be truthfully representative (Denscombe, 1998; Veal, 1997).

Questionnaire-based surveys and interviews play an important role in social research. In the studies of leisure, tourism, customer satisfaction, job satisfaction, and market

trends, questionnaires are used extensively. In terms of tourism research, Veal (1997) identifies the following advantages of questionnaire-based survey methods:

- Questionnaires are ideal to collect information in various aspects, which can be used by governmental organisations, private sectors and non-profit organisations for their decision-making purposes;
- Although questionnaire surveys cannot be entirely objective, the data collection process, data analysis and interpretation can be overseen by the researcher as well as by others. Data collected from questionnaire surveys also provide an opportunity for other researchers to re-analyse it in order to extend the research activity further, or to provide an alternative interpretation of the data;
- Questionnaire-based surveys provide complex information in an easily understood form.
- Using comparable questionnaires to conduct longitudinal surveys and annually repeated surveys enable researchers to study the changes over time;
- Questionnaire surveys allow researchers to obtain a more complete picture of an individual's pattern of tourism activity participation, including activities, duration of stay, expenditure, level of enjoyment, and frequency of undertaking tourism activity;
- Questionnaire surveys enable tourism researchers to acquire and record information on attitudes, perceptions, opinions and preferences in a larger scale.

Postal questionnaire survey

Postal questionnaire surveys, as its name suggests, involves sending self-completion questionnaires by post to respondents. This style of questionnaire survey is respondent self-administered survey. Often there is no personal contact between questionnaire receivers and the researcher. The main advantages of using postal questionnaire surveys are that they can be mailed to a large number of people in a wide geographical area, they are relatively inexpensive, and they are not very time-consuming. Nevertheless, the weakness of postal questionnaire surveys is that the response rate

tends to be relatively low. In general, it is believed that the response rate for a social research activity can be 30 percent or less (Denscombe, 1998; Veal, 1997). The usual tactics to increase response rate for postal survey include providing postage-paid reply envelopes, and providing prize rewards for responding (Veal, 1997). Also, sending reminder to the sample when they do not seem to respond to the researcher is also commonly used (Finn et al, 2000).

The topic and length of a questionnaire also affects the response rate of postal surveys. As mentioned previously, some research topics may be too sensitive to some individuals, it is possible that the respondents either answer the questions dishonestly, or they simply decline to answer them at all. The presentation and complexity of a questionnaire, too, influences the respondents' willingness whether or not to answer it. They are likely to examine the questionnaire before they respond to it, hence, the responses may not be spontaneous or independent. Furthermore, the characteristics of the respondents, such as age, sex, educational level, economic status, and disability have effects on the response rate as well. It is likely that busy people are less possible to spare time on answering questionnaires, especially if the topic is not of interest, or if the questionnaire is too long or too complicated. Illiterate people may have difficulties in understanding the questions.

Telephone survey

In the past, telephone surveys may have been be biased in favour of people who had access to telephones, since they tended to be wealthier, thus, the data obtained was unlikely to be representative. Now, in the UK, the USA and other industrialised countries, telephone interviewing is becoming more widely spread in social research. The development of the economy contributes to the estimation that a researcher is able to contact as high as 91 percent of the people age 18 and above directly by telephone in the late 1990s (Denscombe, 1998). The telephone survey might not be more convenient than postal survey, it is certainly cheaper and more convenient than other research methods, such as conducting face-to-face interviews or participant

observation (Finn et al, 2000; Veal, 1997). Research methods such as face-to-face interviews and observation require the researcher to travel to the respondents. If the research involves in an extensive area, for instance, several counties or even nation-wide survey, the cost for travelling is significantly higher than the cost of telephoning respondents.

However, the response rate of telephone surveys can be low, and the limitation of telephone survey is that it is only suitable for a short interview. Finn et al (2000) suggest that telephone interview should not last more than fifteen minutes. Moreover, telephone survey may exclude people who are in full time education or full time paid job, if the survey is carried out during the office hours only. In other words, if such research activity is to be representative of a population, evening and weekend telephone survey is necessary.

Face-to-face interviews

As its name suggests, face-to-face interviews require direct contact between the respondent and the researcher (Denscombe, 1998). This type of survey is often used for market research purposes: a lady with her clipboard is a familiar sight in high streets or shopping malls. When face-to-face interviews are carried out, interviewer-completion is more advantageous than respondent-completion. Insufficient data collection is likely to occur when the survey is of respondent-completion style, for example, a low response rate of the questionnaires, and poor completion of questions. On the other hand, interviewer-completion face-to-face interview can obtain more information because this method allows the researcher to ensure the return of the completed questionnaire, and when a respondent is not certain of the question(s), the interviewer has the opportunity to clarify it promptly, which helps to reduce incomplete response.

The down side of this type of survey is that it is more expensive and time consuming. Also, the sample size is likely to be smaller than postal surveys or telephone

interviews due to the financial and time constraints. The researcher is required to appear in the survey setting in order to carry out the face-to-face interview, which means travelling to and from various survey locations is necessary.

6.2.1.2 Qualitative data collection methods

As opposed to quantitative methods, which tend to collect limited information about a large number of people, qualitative research methods are used to collect rich information from relatively few people. Qualitative data collection methods, or so-called ethnographic methods, are thought to be better able to include personal changes over time. Qualitative methods attempt to understand the complexity of people's lives in a manner that survey methods cannot (Finn et al, 2000). Jennings (2001, p.22) suggests that "qualitative research enables researchers to highlight detailed and in-depth snapshots of participants under study...qualitative research provides a slice of life from those participants being studied". In comparison, quantitative research tends to look at current social, environmental and economic circumstances. In quantitative research, the fact that most people's behaviour and attitudes are influenced by their experiences and life history is often neglected.

In tourism research, qualitative research is based on the notion that the people who engage in or undertake a particular activity are capable in analysing and describing their experiences or feelings in their own words without being confined within the framework imposed by the researcher (Veal, 1997). Kelly (1980) argues that leisure largely involves interactions between people, thus, qualitative research is better suited to investigate leisure related issues. Scott and Godbey (1990) also emphasise that qualitative data collection methods provide valuable insight into the social circumstances in a leisure setting. Cohen (1988), too, argues that qualitative data collection methods have been neglected by tourism researchers. Sandiford and Ap (1998) suggest that ethnographic methods can be used to assist tourism planning. They identify some aspects that qualitative methods can achieve, such as understanding of tourists' perspectives, assessment of social and cultural impacts on host communities,

understanding of and interpreting current and past tourist phenomena, interpretation of data from other sources such as a survey.

There are three often used qualitative methods in tourism research, namely in-depth interviews, focus-group discussions, and participant observation.

Interviews

In-depth interviews, as the name implies, differs to questionnaire-based survey in the characters of length, depth of data and structure. Instead of asking respondent a question, recording a straightforward answer, and continuing to the next question, in in-depth interviews a researcher encourages respondents to talk, to explain their replies, and even to ask the researcher related questions simultaneously. Hence, such interviews are less structured than questionnaire-based interviews, and usually take much longer to complete. Consequently, the results of in-depth interviews are more detailed and more thorough (May, 2001; Veal, 1997). Moreover, when the research topic is of sensitive issues, in-depth interviews are more able to bring out required information, providing the interview process is handled with care and profession (Denscombe, 1998).

There are three main types of interviews, distinguished by their degree of structure: structured, semi-structured and unstructured interview (Finn et al, 2000). Structured interview is, in fact, a method for collecting quantitative data on a face-to-face basis. Semi-structure interview although has a series of specified questions, it allows respondents more flexibility than in the situation of structured face-to-face interview. In turn, the researcher can seek clarification and development in semi-structure interview procedures. Unstructured interview is employed in ethnographic research, where the aim is to understand the in-depth meanings of interviewees in their own environment. The table below shows the comparison of advantages and disadvantages of these three types of interviews (See Table 6.3).

Table 6. 3: Advantages and disadvantages of three types of interviews.

Type of interview	Advantages	Disadvantages
Structured interview	<ul style="list-style-type: none"> • Interviewees answer the same questions, increasing the comparability of the responses • Reduced interview bias • Responses are quantitative type, easily to analyse using statistical computer package 	<ul style="list-style-type: none"> • Little flexibility • Standardised questionnaire may inhibit response • Pre-determined questions may not be relevant
Semi-structure interview	<ul style="list-style-type: none"> • Combines the flexibility of the unstructured interview with comparable responses in key questions 	<ul style="list-style-type: none"> • Bias may be increased as interviewer selects questions to probe into, and may reduce comparability of responses
Unstructured interview	<ul style="list-style-type: none"> • Interviewee responds in a flexible manner to the interviewer, and vice versa. • The role of an interviewer is minimal, allowing interviewees to express their ideas in their own words 	<ul style="list-style-type: none"> • Comparability is greater reduced and data analysis is more difficult • The quality of data collected highly relies on listening and communication skills if the interviewer

Source: Derived from Finn et al, 2000.

Focus group discussions

The role of the interviewer in focus-group discussions is more of a facilitator than an interviewer (Finn et al, 2000; Jennings, 2001; Peterson, 1994). In a focus group discussion, participants instead of being interviewed individually, they are studied together (Jennings, 2001). The group members range from five to twelve people, who are brought together by the researcher to explore attitudes, perceptions, feelings and ideas about a topic. It is regarded a useful way in investigating attitudes of non-sensitive, non-controversial issues. This method is used commonly in market research, for example, the testing of new product, as well as in social research, such as issues about ethnic minority people, or people with disabilities (Denscombe, 1998; Veal, 1997). The discussion among group members, as well as with the interviewer, is believed to enhance the richness of the data collected. Their interactions can lead to members of the group to reflect to their discussion and to develop further or clarify their positions of the discussion topic (Jennings, 2001; May, 2001).

The advantages of focus group discussions include:

- Enabling participants to interact with others in order to clarify their individual positions of the discussion topic;
- Providing some degree of flexibility to follow unexpected trends or issues in focus group discussions;
- Facilitating a subjective interaction between the researcher and participants that establishes rapport and lead to the development of rich data.

The drawbacks of focus group discussions are primarily associated with the researcher's skills (Jennings, 2001). If a researcher is not skilled to conduct a focus group discussion, it may:

- Be dominated by strong personalities;
- Diverge from the focus of discussion;
- Present a biased perspective;
- Be biased due to the group is constituted by members who do not reflect the variety of viewpoints of the study population.

Participant observation

Participant observation requires the researcher to become a participant in the research process. This research method is more direct than relying on what respondents say what they think or what they do - the researcher gains first hand evidence of what actually happens from their interactions and participation with research subjects. This method of data collection may uncover the hidden meanings and result in a deeper understanding of the behaviour of the studied subjects (Denscombe, 1998; Finn et al, 2001; Kumar, 1996; Patton, 1990). O'Connell Davidson and Layder (1994, p. 168) stress that the researcher usually has to adopt "an almost passive demeanour, absorbing information through observation and conversation in a non-directive manner".

Participant observation allows a researcher to examine interactions and behaviour in a real-world setting, and to be aware of how the studied subjects construct and describe their environment. The information collected usually is first-hand. Such qualitative data collection method can be cost-effective, because several data collection techniques such as observation and interviewing are simultaneously used. Although it may be time-consuming, a wide range of information can be collected, since the researcher is in the study environment over a long period of time (Jennings, 2001; May, 2001).

The most noticeable disadvantage of participant observation is that the reliability of the collected data. The observer's "self" play a crucial role in the process of data collection, which makes repeat study difficult (Denscombe, 1998; Jennings, 2001; Kumar, 1996). Furthermore, the data collected cannot be quantified or generalised, and some events may be taboo and cannot be observed, which results in incomplete information collection. In addition, ethical problems are often mentioned in this research method. If the research subjects know the researcher's identity, the findings may not be truthful. However, keeping the purpose of the research and the true identity of the researcher secret arises ethical debate over this method (Denscombe, 1998; Finn et al, 2000; Jennings, 2001).

6.2.1.3 Combining research methods

Bias can occur when carrying out primary data collection for a research project, whether the data collection methods are quantitative or qualitative. For instance, the research subjects are conscious that they are being studied in a participant observation and they might alter their behaviour; and in an interview or survey, some of the questions may be taboo or sensitive to the respondents and their responses to these questions are less likely to be true.

Researchers suggest that quantitative and qualitative methods can be used jointly to maximise their strengths in data collection and minimise the potential bias from

occurring (Chisnall, 1992; Finn et al, 2000; Jennings, 2001; Miles and Huberman, 1994; Sieber, 1973). Burgess (1982) uses the term “multiple research strategies” to describe the employment of diverse methods in tackling a research project. It is argued that a research which does not encompass observation, informant interviews and sampling is inadequate, and a researcher should be flexible and select a range of data collection methods that are appropriate to the research (Burgess, 1984). Philip (1998, P. 273) stresses that:

“...researchers should think beyond the myopic quantitative-qualitative divide when it comes to devising a suitable methodology for their research, and select methods - quantitative, qualitative or a combination of the two - that best satisfy the needs of specific research projects.”

Philip (1998) also distinguishes the differences between “mixed methods” and “multiple methods”. Mixed methods refer to two or more data collection methods are used to address research questions at the same time in a research process. For example, in a survey a researcher may like to collect quantitative data such as the participant's age, economic status, education level, and qualitative data (through interview) about their holiday experiences abroad. Multiple methods, on the other hand, are used to examine different perspectives of the same research question. For instance, to explore the effects of interpretation in a tourism destination a researcher can use questionnaire to conduct visitor survey and also observe those surveyed visitors during their visits in the site to gather qualitative data of the effects of interpretation on the visitors.

Bryman (1988) suggests different ways of mixing these two data collection approaches, including:

- Either qualitative research helps facilitate quantitative research, or vice versa. For instance, qualitative research can be used to establish research questions and quantitative methods can be employed to collect data.
- Quantitative methods can explore larger scale samples, whilst qualitative research is used to focus on small-scale issues of a research project. This will enable a wide range of issues to be addressed in the research.
- Quantitative research may be more appropriate than qualitative methods to some research questions, and vice versa.

6.2.2 Secondary Data Collection

Most research includes the use of secondary data to discover what work has been conducted before and what research findings it generated on a particular subject. The review of secondary data is an essential step in research design, and the collection of secondary data is suggested to come prior to the collection of primary data (Finn et al, 2000). Collecting secondary data is less demanding in terms of time and effort than collecting primary data, and the review of secondary data is likely to drive a researcher to focus more on the theoretical aims of their study rather than the practical and methodological issues of collecting new data (Babbie, 1995; Hakim, 1982; Lincoln and Guba, 1985). As opposed to primary data collection which is reactive, obtrusive (that is, interaction with research objects is involved) and time-consuming in nature, secondary data collection is non-reactive, unobtrusive (not noticeable) and non-intrusive (Jennings, 2001). Secondary data sources sometimes are used as the basis for an entire research project, in such instance, the researcher is said to be carrying out "desk research" (Kosters, 1994).

Secondary data can be obtained internally or externally. Internal secondary data is the information that is available in libraries, such as literature, publications, and reports. The collection of this type of secondary data is usually economical and relatively speedy. Internal secondary data can provide highly useful information at the early stage of research design, as it helps to develop overall research strategy. Therefore, it

is suggested that research in a library should be carried out before the further research is being conducted (Chisnall, 1992; Denscombe, 1998; Finn et al, 2000). External secondary data includes statistics and reports published by governments, trade associations and other respectable organisations. Market research firms and advertising companies also circulate information frequently. Some of the external secondary data may be particularly important to marketing research purposes.

The literature review is essential in any research project. It enables a researcher to be familiar with the current state of knowledge relating to the research topic in terms of theories, concepts, key issues, debates and terminology, and it helps a researcher to focus on the specific aspect they want to study (Finn et al, 2000; Neuman, 2000). A researcher should be able to review the literature critically and analytically (Finn et al, 2000). A literature review is defined by Hart as (1998, p. 13):

"The selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed."

According to Hart's (1998) definition of literature review, it is clear that the literature review serves a range of important purposes in a research project. It not only provides a researcher with an understanding of the present state of knowledge of the research topic, but also helps the researcher to design their research by indicating how other researchers approached and investigated the similar research topic. In turn, potential research methods may be recommended.

One of the disadvantages of using secondary data sources is the reliability of secondary documents. The researcher who uses secondary data does not always know how the original data was collected and how the documents were produced. As

Tuchman (1994, p. 321) suggests: "Ask questions of all data, primary and secondary sources. Do not assume that anything about data is natural, inevitable, or even true." Moreover, if the secondary data are of statistical type, there might be methodological problems that the original author has written out of (Jennings, 2001). Additionally, secondary data may not always address the exact research question or problem the current researcher attempts to address (Punch, 1998).

6.3 POPULATION, SAMPLE, SAMPLING METHODS AND SAMPLE SIZE

6.3.1 The Notion of Population and Sample

The term "population" in a research project refers to the total subjects that are the focal point of the specific research (Ticehurst and Veal, 1990; Veal, 1997). In tourism research, the subjects can be people, for example, visitors, or study units, such as attractions or facilities. "Target population", on the other hand, is the specific subjects in the total population that the researcher wants to target to study (Neuman, 2000). For example, a research about five-star hotels in a country, the five-star hotel establishments are the target population, where all the accommodation facilities are the total population. Because of the constraints of time and cost, it is often unlikely to survey all the subjects in the population, or even in the target population. In most of the research surveys only a selected proportion of the population is studied. The subjects selected to be studied are called the sample (Finn et al, 2000; Sarantakos, 1998; Veal, 1997). There are procedures to follow to ensure that the sample is representative of the population, or the research findings will be of bias (Denscombe, 1998; Finn et al, 2000; Jennings, 2001).

6.3.2 Types of Sampling

The process of sampling aims to minimise the bias in the sample in order to achieve its representativeness to the population. There are two broad styles of sampling: systematic and non-systematic sampling. Systematic sampling is also referred to as

probability sampling, where each study subject has an equal opportunity to be selected. Probability sampling is also called random sampling, which is commonly used method when the background information of the target population is unknown, and it is often associated with quantitative research methods. Non-systematic style is also called non-probability sampling, or non-random sampling. In the practise of non-probability sampling, each subject does not have the equal opportunity of being selected (Finn et al, 2000; Jennings, 2001; May, 2001; Veal, 1997).

The table below illustrates the differences between probability and non-probability sampling (See Table 6.4).

Table 6. 4: The comparison between probability and non-probability sampling.

	Probability (or random) sampling	Non-probability (or non-random) sampling
Selection of subjects	Structured and systematic	Non-structured
Subjects' opportunity to participate in research	Equal opportunity	Unequal opportunity
Reflexivity of population	Representative	Non-representative
Applicability of findings	Findings can be generalised	Findings are study-group specific

Source: Jennings, 2001.

6.3.2.1 Types of probability (or random) sampling

There are several types of probability sampling techniques: simple random sampling, systematic sampling, stratified random sampling and multi-stage sampling (Denscombe, 1998; Finn et al, 2000; Jennings, 2001).

Simple random sampling

Simple random sampling is the classic type of random sampling, other forms are the variations of procedures of simple random sampling. It is carried out by drawing subjects from the target population in a manner that each subject has the same chance to be chosen. Such method requires statistical independence of the subjects being

sampled: the selection of each sample does not depend on the selection of any other subject (Finn et al, 2000). Subjects in the target population are given a number or a code, and how many times to draw samples from the populations is determined by how many number of samples are needed for the research. For example, the target population is fifty, and ten samples are required for the study, the population would be assigned a number ranging from one to fifty, and ten selections from the population of fifty would be conducted. Random number tables are often used to select samples, which are generated by computer.

Systematic sampling

Systematic sampling is considered to be the most direct and least expensive sampling method (Finn et al, 2000). The procedure of systematic sampling starts in the same way as simple random sampling - in so much as numbers are assigned to each subject in the target population. Following the determination of sample size, the total number of target population is divide by the sample size to find the sampling fraction n . Using the random number table to decide the starting point, and select every n^{th} subjects before or after that starting point until the desired samples are chosen.

Systematic sampling would achieve the same representativeness to the population if all the subjects in the target population are thoroughly mixed. However, there is the possibility that such a sampling method would lead to biased representativeness of the target population resulting from the “built-in” cycles of the distribution of population. For instance, when studying airline passengers or customers in hotels by selecting the samples based on their seat numbers or hotel rooms, the systematic sampling technique will lead the researcher to select their research samples based on a periodic cycle. In the case of airline passengers, if the researcher is to sample passengers sit on seat A and K of each row, the researcher is likely to miss out potential samples who fly business and first class, as there is no seat K in these two classes. To reduce such situation from happening, a researcher can divide the population into equal parts and take different random starts and use different sampling fractions in each part.

In tourism and leisure research, Veal (1998) suggests two ways a researcher may operate systematic random sampling. Firstly, the researcher is stationary and the users/visitors are mobile. Such a situation may be when the interviewer stands by an entrance and visitors are interviewed when they enter or leave the site. The second possibility is that the visitors are stationary but the interviewer is mobile, for instance, in a picnic ground or campsite, where the interviewer moves throughout the site to carry out the survey.

In either way of random sampling in tourism research, the principle is to adhere strictly to the rules of randomness. In many research activities, it is alluring to approach people who “look friendly and might agree to be interviewed”. However, such behaviour may jeopardise the outcomes of the research. Using systematic sampling rule to carry out survey of visitor, for instance, every n^{th} visitor enters Tourist Information Centre will be selected in the situation of stationary interviewer. In the case of stationary visitors, the random sampling can be that the interviewer should move along a certain route, and the every n^{th} visitor group they pass by is to be chosen.

Stratified random sampling

This sampling technique requires some prior understanding of the target population in order to divide the population into strata (sub groups). For instance, if research into the gender differences in selecting transportation mode to a tourism destination is to be carried out, the researcher can divide the target population into two - men and women, and select samples from these two strata according to the proportions of men and women in the total population. In each stratum, simple random sampling or systematic sampling can be used to draw samples until the desired number of samples is selected.

Multi-stage sampling

This sampling method is used when a researcher wishes to study clusters in large geographical areas (Finn et al, 2000; Jennings, 2001). The procedure involves with dividing an area, for example, a metropolitan, into sub-parts based on the postcodes. A sample of these sub-parts are selected, and a number of blocks in the sampled sub-parts are randomly chosen, and residents in the households in the chosen blocks are randomly selected and studied. This sampling method requires skilful researchers to carry out in order to get reliable and representative samples in each strata of each stage.

6.3.2.2 Types of non-probability (or non-random) sampling

As opposed to probability sampling where the sampling frame reflects the target population, non-probability sampling is considered to be difficult to reflect the population and should be used only as a last resort. The selection of samples is usually done in situ by the researcher which, in turn, bias can arise among the samples (Finn et al, 2000). There are several types of non-probability sampling techniques, including convenience sampling, purposive sampling, expert sampling, snowball sampling and quota sampling.

Convenience sampling

This sampling technique is also called accidental, haphazard, chunk and grab sampling (Sarantakos, 1998). As these names suggested, convenience sampling does not emphasise a systematic selection of samples. Instead, such sampling method refers to that the researcher's selection of participants is based on the convenience of approaching those samples at a given time and space (Denscombe, 1998; Finn et al, 2000; Jennings, 2001). Such samples are likely to lack the ability to reflect and represent the target population. Furthermore, there is possibility that a researcher's preference would influence how the samples are drawn. When the research subjects

are human being, it is possible that samples are selected because the researcher feels more comfortable to approach them, or the researcher thinks they are more likely to participate in the survey. When the target population disperses throughout a geographically large area, a researcher may have difficulties to travel around the area and perhaps the researcher only carries out sampling in few of the locations, which inevitably will lead to bias.

Purposive sampling

This sampling method is also named judgmental sampling. A researcher relies on their knowledge of the study subjects to determine what (or who) are the most appropriate to include in the samples (Finn et al, 2000; Jennings, 2001).

Quota sampling

Quota samples are a sort of representative sample where some predetermined variables are made proportionate to the target population. A researcher who applies such sampling technique firstly divides the target population into sub-groups according to the represented percentages of these predetermined variables (for example, age group, sex, economic status, or religion) in the target population. Samples are then drawn using convenience sampling from each sub-group. This type of sampling is often used in market research. This sampling method differs to the stratified random sampling, as in quota sampling the number of samples from each sub-group to be drawn is decided by the researcher, the number of sub-groups are determined by the researcher, and the samples in each sub-group are selected using convenience sampling technique. Whereas in stratified random sampling, each strata, or sub-group, is selected randomly, and samples from each strata are also selected by probability sampling technique (Finn et al, 2000; Jennings, 2001).

Expert sampling

Expert samples are those people the researcher identifies as “experts”. Such samples are usually used in focus group discussions, and these experts use their special knowledge of the research topic to make comments or express opinions (Jennings, 2001).

Snowball sampling

Snowball sampling is also called chain referral or network sampling (Neuman, 2000). It is used when a researcher has difficulty to reach participants, and often the target population is of special, for instance, mountaineering adventurer who had climbed Mount Everest, foreign expatriates or blind people. People belongs to these special population groups often know each other, whilst for an outsider it may be difficult to obtain such information as they are not in the network (Finn et al, 2000). Once the researcher has identified an initial sample (or a number of samples) they are asked to supply the researcher with names of other potential samples.

6.3.3 Sample Size

Some common misconceptions that arise among researchers include that the larger the sample size the better or more representative, and the sample size is based on the size of the population. In fact, wanting the sample to be representative of the population, the composition of the sample is an important aspect to be considered, not only the size of the sample. Thus, as mentioned above, random sampling techniques should be used to ensure the representativeness of the samples to the target population.

In a research project, the size of sample is often affected by the available funding, time and human resources to carry out the research (Finn et al, 2000; Ryan, 1995). Another important factor that determines sample size is the level of precision required. The degree of precision can be explained by the extent that the sample reflects the

population (Veal, 1997). In other words, precision is the degree of error that can be tolerated in the research (Finn et al, 2000; Veal, 1997). Many researchers seek to achieve the precision level of 95 percent, that is, 2.5 percent of the sample falls in either sides of the normal distribution of the population (Finn et al, 2000; Veal, 1997). In other words, randomly selected 100 samples to participate in a research project, 95 of them will produce the statistical values that are representative to the statistical values of the population.

Yamane (1967, p. 579) interprets precision as “the length of a confidence interval”. The smaller the length of confidence interval (i.e. the precision level), the more precise the confidence interval will be, and the larger the samples are required. For instance, when the target population is 2,000, wanting to achieve precision level of $\pm 10\%$ of 95% confidence interval, the required sample is 95, whereas sample size has to be 333 when wanting to achieve $\pm 5\%$ precision level (See Appendix B).

In quantitative research, the sample size is usually larger than in qualitative research. In the case of tourism research, the target population can sometimes be specific and unique. For instance, when studying tourists' choices of activities in a resort, the target population is the visitors who stay in that resort and the day visitors to the resort. If the resort is exclusively for membership holders only, the population is even smaller. In this instance, all the members can participate in the research, providing they are willing to and the researcher has sufficient resources to conduct a saturation survey. However, when the target population is large, for instance, the annual number of visitors to the Disney World, Orlando, or the annual number of visitors to London, it is not likely to survey the entire population. Nonetheless, determining the sample size does not necessarily imply that the size of sample carries some form of relationship to the target population, such as, 5, 10 or 20 percent of the population should be selected as samples (Ticehurst and Veal 1999). According to Krejcie and Morgan (1970), when the target population is known, the size of sample does not increase in linear relationship with the increasing size of the known target population: when the known

target population is small, it is necessary to select more samples in order to generalise the research findings to the population.

6.4 DESIGN AND EVALUATION OF THE RESEARCH TOOL - THE CASE OF QUESTIONNAIRES

Questionnaires, as an information gathering tool, require careful design in order to achieve their objectives - to collect needed information of the key concepts of the research project without confusing the survey participants and/or the researcher, and without compromising the quality of the information. Thus, a researcher should take into account what questions are to be included in order to collect the needed data to fulfil the aims of the research or to test research hypotheses, the style and wording of the questions, and the presentation of the questionnaire (Finn et al, 2000; Jennings, 2001; Oppenheim, 1992). If the design of the questionnaire is not appropriate, the data collected is unlikely to be satisfactory. The general principals of a well-designed questionnaire are:

- The questionnaire should be word-processed, and the questions should be numbered and appropriately spaced, and in the correct order;
- Only needed questions are included;
- The researcher should ensure the confidentiality of the participants;
- Sensitive questions, such as personal information, should be placed in the end of the questionnaire, whereas most interesting questions should come first;
- There should be a cover letter to introduce the survey participants about the objectives of the research as well as to arouse their interests in taking part in the research;
- A researcher should avoid leading questions. Double question, unfamiliar words, phrases, and jargons also should not be used in questions;
- Questions that require the respondents to recall their past experiences should be avoided when possible, since their ability to recall the past events varies.

As mentioned earlier, questionnaires are used to test research hypotheses. In quantitative research, hypotheses are the focus of the research (Kumar, 1996). Punch (1998, p.39) suggests that a hypothesis is “a predicted answer to a research question”. When testing hypotheses, there are at least two variables: an independent and a dependent variable. The independent variable is also referred to as casual variable (Neuman, 2000) or change variable (Kumar, 1996), and the dependent variable is also named outcome variable (Kumar, 1996). Neuman (2000) describes hypotheses as casual hypotheses that state a tentative relationship between variables. Null or alternate hypotheses state the opposite of the casual hypotheses. The following example illustrates these terminology in a tourism research:

- Casual or research hypothesis: an increase in hotel room rates in Bournemouth hotels will result in a decrease of number of staying visitors to the town :
 - The casual/change/independent variable of the hypothesis: the increase in hotel room rate in Bournemouth hotels
 - The outcome/dependent variable: a decrease of number of staying visitors to Bournemouth

- Null/alternate hypothesis: there will be no difference in the number of staying visitors to Bournemouth resulting from the increases in hotel room rates in Bournemouth

Often in quantitative research and when the researcher wishes to test the theory that the research hypotheses are based upon, the research findings are used to reject or accept the hypotheses (See Figure 7.1). Statistical packages are usually used to test the level of significance in order to either reject or accept the hypotheses.

6.4.1 Question Types

Most of the questions are either open or closed questions (Finn et al, 2000; Oppenheim, 1992; Veal, 1997). Closed questions have pre-coded answers that are given to the survey participants to choose from. Open questions are also called free-response questions, participants are encouraged to express themselves more openly. There are no answers offered to the participants, and the researcher is required to record answers in full.

Open questions have the advantages of allowing respondents to reply to the questions freely, and the richness and spontaneous expression from the respondents are likely to form the basis of new hypotheses (Oppenheim, 1992). However, the downside of open questions is the difficulty of classifying the answers. If the responses are recorded in a verbatim manner, the research report can be dull and long. If they are coded, some of the richness of the replies is likely to be lost. The common practise of analysing open questions is to identify some unity in the answers, and some of the answers are reported in full in the final report (Oppenheim, 1992).

From a respondent's viewpoint, closed questions are easy to answer; to the researcher, they are relatively quick to analyse compared to open questions. The disadvantage of closed questions is that the depth and richness of the responses may not be as good as of open questions, because the respondent is forced to choose an answer which is best related to what they truly feel or think from a set of pre-coded answers (Finn et al, 2000; Oppenheim, 1992). Closed questions can be coded into and analysed by computerised statistical packages such as SPSS. To overcome the problems of closed questions, a researcher can probe further by asking the research participants to explain more of their answers. However, Oppenheim (1992) suggests that caution should be exercised when probing, in order to reduce the risk of interviewer bias resulting from the researcher's directive or leading questions. In other words, the participant should be allowed to express their thoughts or feelings in their own words.

Closed questions can be used to collect factual as well as attitudinal information (Oppenheim, 1992). In tourism research, studying participants' attitudes and opinions is often important and necessary. Likert developed a rating scale to measure attitudes in 1932 (Jennings, 2001). Likert scale is popularly used because it is easy to construct and administer. It requires respondents to indicate their degree of agreement or disagreement with a statement, or a set of statements, concerning a specific topic along a continuum scale. For example, issues about a building new cinema complex, such as the new complex would bring in more opportunities, increased job opportunities, more litter, higher crime rate, higher property price, are designed as a set of statements. The residents of the town are required to express how much they agree or disagree with each statement.

Five-point Likert scale is often used: strongly agree, agree, indifferent, disagree, and strongly disagree, and these positions are given scores of 1 to 5 (or 5 to 1). The scores not only allow the researcher to code the questions into statistical package easily, it also enables the researcher to analyse the statistical facts of these statements. For instance, when “strongly agree” is scored as 5 and throughout to “strongly disagree”, as 1, if the statistical results show a mean value of this statement 4.5, the researcher can report that the degree of agreement with this statement from the survey participants is high.

6.4.2 Pre-testing Questionnaire and Pilot Studies

Pre-testing the survey questionnaire means giving the questionnaire to a small number of people to test the measures or questions a researcher intends to use, and these people should be similar to the target population (Finn et al, 2000). The purpose of pre-testing some or all of the questions in a questionnaire is to examine how well the questions and instructions are understood. Pre-testing questionnaires can also identify any errors and vague meaning questions. The feedback from the pre-test participants provides the researcher with valuable information, in turn, errors, unclear meaning questions and unclear instructions can be corrected and clarified.

A pilot survey, on the other hand, is a small-scale trial of a large survey (Finn et al, 2000; Jennings, 2001; Oppenheim, 1992; Veal, 97). There are different suggestions as to how many participants should be included, Finn et al (2000) think 25 interviews of surveys are sufficient, whereas Jennings (2001) recommends that at least 50 participants are needed in order to determine the effectiveness of the survey instrument and the procedure of the survey. The purposes of conducting a pilot survey are multi-fold, to summarise, the purposes and functions of pilot study are as follows (Finn et al, 2000; Oppenheim, 1992; Veal, 1997):

- Testing the questionnaire, including wording, sequence of questions, layout and presentation of the questionnaire;
- Examining whether the questions are understood consistently by all the participants;
- Pilot study enables the researcher to familiarise with survey process, including sampling technique, survey arrangement, and the time required to complete a survey;
- If there are other research assistants involved with conducting the survey, pilot study can help to train them;
- It helps estimate response rate;
- The results generated from pilot study can be used to test analysis procedure.

6.4.3 Reliability and Validity

It is necessary for a researcher to check that research questions and measures used to collect data are reliable and valid to stand up to scrutiny (Jennings, 2001). Reliability is the extent to which research findings would be consistent if the research were to be repeated at a later date (Finn et al, 2000; Veal, 1997). Within the deductive, theory-testing style of research, as Babbie (1990, p. 132) puts it: "Reliability is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same result each time." Validity, on the other hand, refers to "the extent to which an empirical measure adequately reflects the real meaning of the concept under

consideration." (Babbie, 1990, p. 132). Babbie (1990) suggests four types of validity: face validity, criterion-related validity, content validity and construct validity.

Face validity refers to the fact that the concept being measured is being done in an appropriate way, that is, "on the face of it" (Sarantakos, 1998, p. 79). In a research that attempts to measure visitors' satisfaction at a tourism destination, wanting to establish face validity of the research the researcher needs to include research questions relating to visitors' level of satisfaction about tourism facilities, services, attractions and amenities.

Criterion-related validity is associated with establishing measures that will be able to predict future outcomes relative to a particular criteria (Jennings, 2001). This is particularly used to determine a research object's potential behaviour or ability. For instance, prior to participating in scuba diving, instructors of diving school may ask prospective participants to complete a questionnaire that is aimed to determine whether they have the ability to undertake diving activity safely. This validity measure is also termed predictive validity (Jennings, 2001).

Content validity refers to the use of measures that incorporate all of the meanings relating to a concept. For instance, when research visitors' travel experience, the questions should include asking visitors about not only of "travel to" and "on site" experiences, but also their decision-making processes, travel planning, experiences of returning home, and travel experiences that involve multiple destinations (Jennings, 2001).

Construct validity is a measure that consists of several indicators that are theoretically sound. For example, in a study of travel motivation, Maslow's hierarchy (1943) of needs can be used to provide different indicators for motivation, such as survival, belongingness, self-esteem and self-actualisation (Jennings, 2001).

Some researchers identify “internal validity” and “external validity” (Finn et al, 2000). Internal validity refers to whether the hypothesised cause produces the given result in a research. In other words, in an experimental research, if the controls are effectively set up and all other non-essential variables are eliminated, then the internal validity is high. However, in the survey style research, internal validity is often low when the only control is of statistical type when the data are being analysed. External validity, on the other hand, refers to the extent to which the research results can be generalised. This is also referred to as the representativeness of the results (Finn et al, 2000). There are two aspects of external validity, namely “population” and “ecological”. Ecological validity refers to generalisation to other setting. Population validity is about whether the research can be generalised to other groups of people outside the researched sample. If sampling has been conducted using probability methods, then the research findings can be generalised to the population from where the sample is drawn.

A questionnaire is designed to collect information from people about their characteristics, behaviour and attitudes. In the case of questionnaire survey, the validity of the research is based on several considerations: (1) the interview may not be conducted carefully; (2) respondents may exaggerate or understate their answers, (3) respondents may have difficulty in recalling some information correctly, or (4) respondents may tend to give answers that they think will please the interviewer. Therefore, the validity of data collected from questionnaire is a constant source of concern (Veal, 1997). One approach to increase of the validity is to include two or more questions in different parts of the questionnaire which in fact ask the same thing. In so doing, the responses can be tested for consistency (Veal, 1997).

Now that the philosophy of the research methodology has been discussed, the section below sets out the research background and procedures for the surveys of the New Forest visitors.

6.5 THE RESEARCH OF THE NEW FOREST VISITORS

The researcher adopted the theory-test research methodology suggested by Finn et al (2000) (See Figure 6.1) to conduct the research of New Forest visitors. Hence, the review of literature was the starting point. Based on the knowledge gained from the literature review, research objectives and hypotheses were derived.

6.5.1 Identification and Formulation of Research Problem

6.5.1.1 Literature review of theories and concepts of visitor management, communication, and behavioural modification

Drawing upon the experience of previous research carried out by tourism scholars, successful visitor management is essential to help manage resource based tourism destinations. Moreover, a combination of hard and soft visitor management approaches is effective to modify visitors' on-site behaviour while attempting to enhance their understanding and awareness of the tourism resources (See Chapter Two). In the case of resource-based tourism attractions in outdoor settings, for instance, national parks, forests, reserves and protected areas, the interactions between visitors and the resources are intensive, if not unlimited. Although regulations and restrictions on visitor activities are applied to minimise the degradation of these resources, as well as to ensure visitors' safety, the size of these tourism destinations are generally significantly larger than an enclosed indoor tourism attraction. This results in some difficulties in resource management and protection. Furthermore, there are likely to be multiple entrances and exits to these outdoor sites, which add further complications to controlling and monitoring visitor flows and their activities. Such sites do not only provide citizens with opportunities to undertake recreational activities, but are also important elements of human heritage. The educational values of these sites cannot be neglected as the landscape of the areas was sometimes formed by human activities over the centuries. Thus, it is often impractical and undesirable to fence off the resources from visitors.

The researcher has enlisted the support of various theories of communication, learning, behavioural modification, and literature of visitor management in order to form the foundation for this research. Interpretation in tourism destinations is a type of communication, of which the objectives and expected outcomes are laid out in the management plan of the destination. More importantly, the initiative of any interpretation is to effectively support managing authorities of tourism sites to provide satisfying visitor experience and to protect resources for long-term use. It does not seem to be logical to the researcher to overlook the delivery of information and the complexities of human's learning activities and behavioural modification. Thus, the researcher used the above literature in shaping the profile of this research. Also, information provided to visitors has a variety of purposes. In spite of the various media used to deliver the information, the purpose of such information is to communicate with visitors with respect to directional, educational and administrative information. Hence, such information should be easily reachable.

The concepts and different approaches of visitor management cannot be practical or effective without the understanding of theories of communication and behavioural modifications. Environmental interpretation is communicating with visitors, aiming to modify their inappropriate behavioural intentions to be more sensible and responsible to the resources and other visitors. Therefore, the factors of effective communication in the context of environmental interpretation are identified: user-friendly media, easy understanding information, dynamic and varieties of information and active delivery of information, quantity of available information, and accessibility to the information and the media. In other words, successful communicating with visitors requires information and its delivery to fulfil the above five criteria.

Theories of learning, behavioural intentions and changes emphasise the role knowledge plays in an individual's behaviour formation, and an individual's knowledge is formed through the basic accumulation of information and more complex learning psychology. The test of knowledge and behaviour formation is beyond the scope of the research of visitor management. Nevertheless, the importance

of information is shown in the various theories of learning and behaviour modification. In addition, the enforcement and resource alteration of hard visitor management approach intends to modify “forcefully” visitors’ behaviour during their visits to the site. Hard visitor management attempts to use managing agencies’ authority to enforce visitors to comply with the applied rules and regulation. This reflects to the communication source’s power in the theory of communication.

In short, the knowledge gained from the literature review of the theories and concepts of these three main themes, namely visitor management, communication theories, learning and behavioural modification theories, formed the foundation of the research.

6.5.1.2 Research site selection criteria

The New Forest is a popular tourism destination for residents in the Southern England. This high demand for recreation in the New Forest resulted in the necessary construction of infrastructure and tourist facilities such as roads in and around the New Forest, car parks, picnic and barbecue sites and campsites. However, it would be inappropriate to feature four-lane highways or tourist resort complex in the New Forest because of its very nature - such construction would damage not only the landscape of the New Forest, but also the tranquil atmosphere the New Forest offers. On the other hand, this limited traffic capacity to and within the New Forest, to some extent, helps controlling the visitor numbers and flows. Nevertheless, the sheer number of visitors inevitably causes some negative impacts on the New Forest landscape and wildlife.

During the survey work, the researcher travelled around the New Forest and observed incidents resulting from the high pressures on resources in the Forest, and evidence of inappropriate visitor behaviour. For example, although the road networks in the New Forest are convenient and accessible, they were not designed to cope with heavy traffic flow during the peak season, many of them are just wide enough to allow one car to go through at a time. Moreover, there are towns and villages that suffer from the

influx of visitors' cars in the summer season, the most noticeable being Lyndhurst. Lyndhurst is situated at the heart of the New Forest, and is closely linked via Cadnam onto the junction of the M27. The main Tourist Information Centres is also located at Lyndhurst. Therefore, the traffic conditions in Lyndhurst can be chaotic in the summer months, especially during weekends and bank holidays.

Inappropriate visitor behaviour also includes littering and vandalism. For instance, crisps bags, food wraps and cigarette ends are often seen, especially on designated walking and cycling tracks, car parks and picnic grounds. Some of the interpretive printed materials provided by the managing agencies of the New Forest also end up as litter on the ground. Eventually the Forestry Commission decided to abandon the provision of the leaflets they designed and distributed at the beginning of some particular walks (H. Wood, personal communication, June, 2002).

Animal feeding seems to be becoming "a way of teaching children about wildlife". The researcher was surprised to see how parents demonstrated to their children: they pat the ponies, feed them, and even ask their children to "come closer to feed them a carrot". The famous New Forest ponies are used to being fed by visitors. They approach visitors, which brings excitement and delight to visitors. However, children, sometimes adults, may be attracted and come too close to the ponies, which startles them and can result in unnecessary injuries to the visitors. Visitors might think these ponies are rather cute and fluffy but in fact, these ponies are wild and can be aggressive. Also, feeding wildlife is not in keeping with the wilderness and natural setting of the Forest, since it alters the habits of the New Forest's inhabitants. Cases of angry ponies attacking visitors because they did not want to feed the ponies have been reported to the Forestry Commission rangers in the past (H. Wood, personal communication, June, 2002).

Furthermore, the geographical location of the New Forest adds more pressure upon the resources of the site. Situated in the South East of England where is densely populated, the New Forest is within two hours drive from Greater London. It was said

that three decades ago, there was a population of eight million within two and a half hours drive from the New Forest; today the figure is almost fifteen million within one and a half hours drive from the New Forest (Forestry Commission, 2001a). Since it is an open forest and is adjacent to major metropolitan, cities and numerous towns, it allows car-borne visitors easy access to enter the New Forest from various locations without difficulties or restrictions. Also, factors such as open land, easy access, developed road networks, and more than one entry/exit points means that visitors are likely to disperse in the New Forest, which, in turn, lead to difficulties to the New Forest managing authorities to control visitor flows and manage their activities effectively.

The above issues relating to tourism impacts in the New Forest resources motivated the researcher to carry out a study of visitors' experience and perceptions of the current visitor management in the site. The researcher felt that the visitors' viewpoints would be beneficial to the New Forest managing agencies to plan and implement their management strategies. Moreover, the researcher believed that environmental interpretation could be used more extensively and more effectively to support the management of resources in the Forest. For instance, organised talks, walks, interpretive signs and bulletin boards, interpreters and rangers were expected to be freely available in such a popular tourism site by visitors. Nevertheless, after several visits to the New Forest as a visitor prior to the commencement of the visitor survey, the researcher recognised that, in fact, there is little evidence of an effective interpretation programme.

Tourist Information Centres in the New Forest is little more than a display centre for leaflets, selling maps and books, booking accommodations on behalf of visitors upon requests, and giving directorial information to visitors. The New Forest Museum is underused because very few visitors actually paid and saw the indoor exhibition and audio-visual programmes in the Museum. The main function of the Museum seemed to the researcher to be the selling of souvenirs rather than playing an active role in delivering interpretation to visitors. Therefore, it was felt that the current functions of

the Tourist Information Centres and the New Forest Museum could be extended to include more interpretation related material and programmes rather than just offering directorial information and selling souvenirs.

In the New Forest, bulletin boards are situated in the car parks of the popular walks, and interpretive panels are only found in Tall Tree Walks. The mobile information booth provided and operated by the Forestry Commission serves visitors only in the car park of Bolderwood, which is probably the most popular honey-pot of all, and it is only operated on a seasonal basis. Furthermore, road signs in the Forest are not clearly situated to indicate directions. Some of the signs are small in size, or use small fonts. Some signs have been vandalised, and some have been eroded by the elements such as rain and sunray. Because of the perceived problematic and lack of interpretation in the open forest, the researcher decided to choose the New Forest to carry out the research, since these issues are worth exploration.

6.5.1.3 Research aims and hypotheses

The study of the practice of visitor management strategies in tourism destinations aims to prove that the use of visitor management can help the protection and management of the resources in the site while providing visitors with enjoyable experiences, and the New Forest is chosen as a case study. According to the literature, it is suggested that the various strategies of visitor management can help enhance visitors' experiences, understanding and appreciation of the values of the resources. Furthermore, the use of regulations, charges for car parks and other facilities, and physical alteration and resource hardening have a direct and immediate effects on managing visitors' flow and behaviour. Hence, the research aims to demonstrate that a combination of various visitor management strategies is crucial in maintaining long-term tourism development in tourism site.

The particular interests of this research are visitors' formation of intentions to engage in desired behaviour that is induced by effective and persuasive communication with

them, visitors' perception of the practised visitors management strategies, and their preference of media.

Firstly, the research attempts to demonstrate that effective communication with visitors is critical in successful visitor management, because visitors need to be made aware of the existence of the various techniques applied, and the information provided to visitors should be wide ranging and comprehensive, including directorial, administrative and interpretive/educational information.

Also, the strengths and weakness of the visitor management strategies and the media used in the research site are explored. In this research, visitors' awareness of the applied visitor codes, their purposes of going to the Tourist Information Centres, perceptions and preferences of media, site managing authorities' techniques in controlling visitor flow, and visitors' perceptions of the practice of the visitor management techniques are examined. The research findings are expected to provide indications with respect to what visitor management strategies should be improved in order to maximise its effectiveness in the research site.

Additionally, according to the literature review, the factors that influence visitors' formation of intention to behave in a particular way include an individual's knowledge, skills to act, perceived subjective norms, the availability of other alternatives, personal factors and their acceptance of the "users pay" principle. The research attempts to determine what factors affect the sampled visitors' willingness to pay for car parking and what was deemed to be an acceptable charge for parking in the research site. During the survey period, car parking was free of charge in the New Forest. Hence, in order to achieve this research objective, hypothetical questions relating to whether visitors are willing to pay for car parking and how much they are prepared to pay were used to explore this issue.

Moreover, the available secondary data do not provide consistent figure with respect to the annual visitor numbers to the New Forest and the usage of the site. Therefore,

based on the collected data from the survey, firstly, the visitor numbers and usage of the New Forest per annum is explored. Furthermore, the sampled visitors' profile is established, including their demographic background, purposes of visits, length of stay, types of accommodation for overnight stay visitors, geographical origins of their residences, transportation mode to come to the site and the outdoor activities they carried out.

The research hypotheses include:

- The easy accessibility to the New Forest contributes to the large volume of visitors from the nearby regions/counties;
- Because of the easy accessibility to the New Forest, visitors are likely to make spontaneous decisions to visit the site. Therefore, the time lapse between decision making and their visits to the Forest tends to be short;
- Factors that affect the time lapse between decision making and visits to the site include the visitors' geographical origins of their residences, whether they stay overnight in the site and their purposes of visit;
- The predominant market of the New Forest is the family sector - as per most of the marketing material suggests/shows, family members strolling on the grass land of the New Forest and carrying out activities such as having a picnic, cycling, walking pet dog and camping;
- Visitors' overall satisfaction is affected by factors including their level of enjoyment from their participation in outdoor activities, and their perceptions of the quality of the tourism facilities and the scenery - this relationship should be positively correlated;
- Visitors lack knowledge about the existence of the applied visitor codes in the New Forest, except for the two most seen codes - 40 mph speed limits and animal feeding is prohibited;
- Visitors' familiarity with the New Forest has a direct and positive link to their knowledge of the existence of the applied visitor codes;

- Visitor' familiarity with the New Forest also affect their purposes of going to the Tourist Information Centres;
- Visitors familiarity with the New Forest will have an influence on their perceptions of the effectiveness of the media in delivering information - that first-time visitors are likely to have lower grade of perceptions of the effectiveness of media than repeat visitors;
- Printed material such as guidebooks, site maps and leaflets are the most favoured medium by visitors, irrespective of the destinations they go to visit;
- Visitors would not object to the idea of paying for car parking in the Crown Lands of the New Forest, subject to the assumptions that firstly, the car park ticket is transferable within the car parks in the Crown Lands, and secondly, the financial gain from car park charges are to be used for resource protection;
- Visitors' willingness to pay for car parking is affected by several factors, including their overall satisfaction, length of stay (stay overnight or not), first-time or repeat visit to the site, geographical origins of their residences, visitor group composition, their economic status and age;
- There should be positive relationship between visitors' receiving relevant information and the formation of intentions to behave in a desired manner - if visitors are provided with information with negative impacts upon resources resulting from inappropriate visitor use, they are more likely to modify their activities to be more appropriate.

6.5.2 Determination of Research Design

In spite of the vast amount of literature about tourism management, visitor management, communication theories and theories of learning and behavioural change, there was little research into the application of communication and behavioural modification theories to effective visitor management in the UK. On the other hand, up-to-date research of the New Forest visitors and tourism activities was limited. This was because the main managing authorities of the New Forest, which is directly involved with the provision and management of tourism and recreation, the

Forestry Commission and the New Forest District Council, lacked the human resources and funding to carry out tourism and visitor research in the New Forest regularly.

The review of literature of tourism and theories of communication, learning and behavioural modification formed the aims and hypotheses of the research. It also helped the development and design of the questionnaire. The data collected from the available previous research about the tourism and visitors in the New Forest provided the researcher with information such as seasonality, popular activities in the New Forest, accommodation types and bed spaces and transportation modes visitors used. However, various tourism researchers as well as the officers of the managing organisations of the New Forest debated visitors' usage of the New Forest. The difficulty of measuring the actual number of visitors is contributed by the difficulty of knowing the frequencies of local residents' uses of the New Forest. Researchers believe the frequencies of local residents' visits to the New Forest were high, however, the exact figure is not yet clearly identified. Because the local residents are familiar with the area, the locations they go to and carry out recreational activities are less likely to be the tourism honey-pots. Moreover, because of the convenient accessibility, local residents might prefer to come to the site at the time when other visitors are less likely to be around, for instance, late afternoon or early evening in summer months. Hence, in the available secondary data, the figures of annual visitor number and visitors' usage of the New Forest vary.

6.5.2.1 New Forest visitor research method - on site researcher completion face-to-face structured interview

The research of the visitor management strategies as an important practice to manage tourism development in resource sensitive area is a theory-test study (See Figure 6.1). The evaluation of the various data collection techniques helped the researcher to consider that using questionnaire to survey visitors in the New Forest is most suitable to fulfil the research aims and to test the research hypotheses. In order to ensure the

quality of responses and to take the tourism seasonality in the New Forest into account, respondents self-administered questionnaire survey was not considered to be the best solution. Thus, researcher-completion, on-site questionnaire-based structured interview with the sampled visitors was used to collect data.

The rational of using such data collection technique were:

- Researcher-completion method allows the researcher to control the flow of the interview, and to reduce the potential participants' confusion;
- Many of the research questions are suitable to use questionnaire to collect data;
- Face-to-face interview method allows the flexibility that the participants can express their feelings and thoughts in their own pace using their own words, which, can enhance the richness of the collected information;
- On-site visitor survey allows the participants to "interact with" the New Forest environment, that their experiences, thoughts and perceptions of the resources and facilities are first-hand when they are interviewed;
- Such data collection method minimises the non-completion of questionnaire.

One may suggest that surveying visitors both prior to and after their participation in any type of environmental interpretation activities regarding their perceptions and opinions of the activities will be an ideal data collection technique. Such practice is carried out in other research, and the findings demonstrate that well-designed interpretation programmes can encourage visitors to modify their intentions of visiting sensitive sites because of their increased understanding of the potential impacts upon the resources resulting from their visits (Woods & Moscardo, 1996, see Chapter Two). However, this pre-and-post survey of visitors is difficult to conduct in the New Forest because of the multi-entrance/exit character of the New Forest.

6.5.2.2 Research instrument design - questionnaire

The majority of the questions in the visitor survey questionnaire were closed questions. Questions about visitors' opinions and perceptions were designed on the basis of five-point Likert scale, where one refers to the least/highly negative and five to the most/highly positive. Five-point scale allows the survey participants to select answer such as "neutral" or "average" (lies in point 3 along the scale). Also the option of neutral/indifferent/average indicates an important message: selecting the answer of "average/neutral" may be the reflection of being polite rather than being truly honest. Five-point Likert scale also allows interviewees to have options of moderate positive and moderate negative. For instance, when a survey participant chose point 4 in the scale, it suggests that the particular issue is of "important" or "enjoyable" or "satisfied", instead of "very important" or "very enjoyable" or "very important". Point 2 along the scale, on the other hand, indicates that particular item is of "not very important" or "not very enjoyable", where point 1 means strongly negative. Findings of those questions using five-point Likert scale to study interviewees' opinions and preferences enable the researcher to identify how strongly they feel toward a particular issue.

The researcher believes that when visitors have enjoyable and satisfied experience of their visit to the New Forest, they would be more willing to help maintain the quality of the resources. Their experiences may be affected by the quality of the service and facilities. Therefore, visitors' opinions relating to the quality of the service and facilities would be an indicator of their enjoyment and experiences. Furthermore, visitors' views of media, visitor management strategies and information provision point out what needs to be improved and implemented. Such information can be used to cross check with interviewees' intentions of behavioural modification.

In order to research the survey participants' potential of behavioural modification, the research questions were designed to study their behavioural intentions - if visitors could be provided with sufficient information would their intention to engage in more

appropriate behaviour and activities be induced. Such research findings clinically are insufficient to lead to the conclusion of the relationship between behavioural intentions and the production of actual behaviour, as the behaviour production involves more complex factors, and of which is not within the scope of tourism and visitor management research. However, the findings can still explain the relationship between visitors' receiving of relevant interpretive information and the formation of intention to conduct desired behaviour.

The figure below shows the sequence of the questionnaire in line with the research aims and hypotheses (See Figure 6.4).

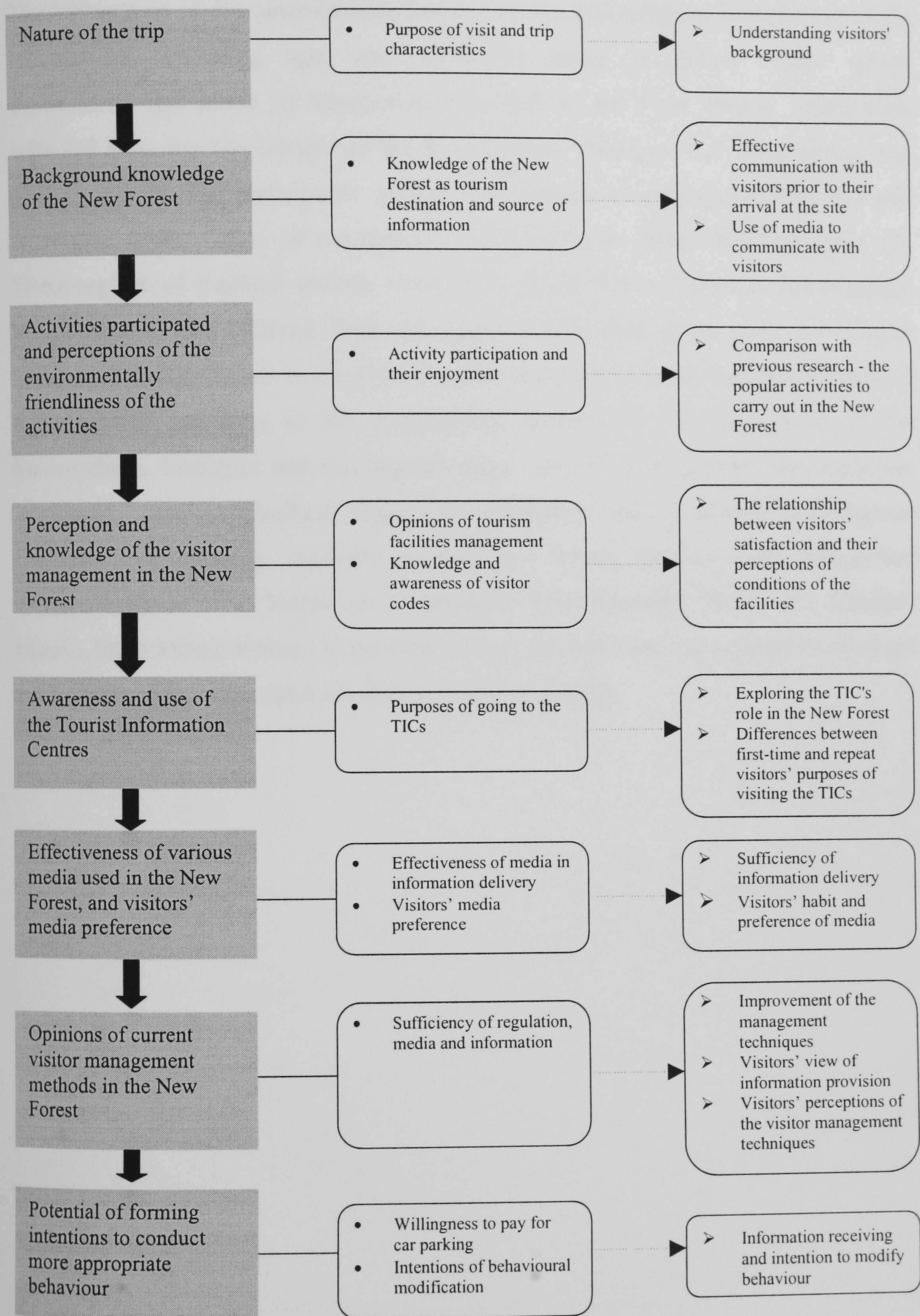


Figure 6. 4: The structure and flow of the questionnaire for visitor survey in relation to research aims and hypotheses.

The last section of the questionnaire focused on the demographic information of the interviewees, including age, sex, economic status, residence, visitor group composition and mode of transportation to and in the New Forest. Information collected from the Department of the Environment, Transport and the Regions was used to classify the participants' geographical origins of residence (Matheson and Gedwards, 2000; Office of the Deputy Prime Minister, 2001) (See Appendix C). These regions of England include North East, North West, Yorkshire and Humber, West Midland, East Midland, East of England, South West, South East, and Greater London. The table below is the more detailed information of the counties in each of these regions according to the geographical division by the Department of the Environment, Transport and the Regions (See Table 6.5). Moreover, the researcher introduced other geographical regions to emphasise and to include non-England residents. For instance, residents in the New Forest District were categorised independently as NFD locals, so as residents from Scotland, Wales and Channel Islands. International visitors to the New Forest, although they were minority amongst the total samples, were asked about their country of origin.

Table 6. 5: Regions and counties according to the Department of the Environment, Transport and the Regions.

Region	Counties and Districts served
North East	Durham, Northumberland, Teesside and Tyne and Wear
North West	Cheshire, Cumbria, Greater Manchester, Lancashire and Merseyside
Yorkshire and Humber	North Yorkshire, South Yorkshire, West Yorkshire and the Humber
West Midland	The Metropolitan Districts of Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton and the Counties of Hereford and Worcester, Shropshire, Staffordshire and Warwickshire
East Midland	Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire and Rutland
East of England	Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk
South West	The Unitary Authorities of Bath and North East Somerset, Bristol, North Somerset and South Gloucestershire and the Counties: Cornwall and Isles of Scilly, Devon, Dorset (including the new Unitary Authorities of Bournemouth and Poole), Gloucestershire, Somerset and Wiltshire (including the new Unitary Authority of Swindon)
South East	Berkshire, Buckinghamshire, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey, East Sussex and West Sussex
Greater London	Greater London

Source: Office of the Deputy Prime Minister, 2001; Matheson and Edwards, 2000).

6.5.2.3 Pilot studies

The pilot studies were undertaken in two stages – the pre-test of the wording and style of the questionnaire, and the pilot study of the revised version of the questionnaire and the sampling technique in the New Forest.

The pre-test of the wording and style of the questionnaire was taken place during the last week of May 1998, and the feedback suggested that the wording, sequence and presentation needed improvement in order to arouse samples' interests in the survey. The piloting of the revised questionnaire was conducted during August bank holiday in 1999 in the Tourist Information Centre in Lyndhurst and in the car park of Bolton's Bench. Thirty-four face-to-face interviews were carried out during the period of three-day weekend in these two locations, and the samples were selected according to the principles of systematic sampling technique.

The researcher set up the interval of selecting every 5th visitor. On completion, after the necessary preparation for the following interview, the systemic sampling method of every fifth visitor as the chosen sample was repeated. When the prospective interviewee declined to participate in the research, the next visitor was chosen, and this process was repeated until one of the potential samples participated in the survey.

As an international student, using the English language to carry out the survey of British respondents was not thought to be an easy task. The pilot survey not only enabled the researcher to familiarise herself with the procedure of interviewing visitors, but also helped the researcher to know whether there would be confusion or misunderstanding resulting from the language barrier, for instance, in terms of accent. In general, the rejection rate from the selected samples was low during both pilot studies and the actual survey. In fact, many participants were interested in knowing what the researcher was studying and willing to take part in the survey.

The purpose of the pilot research activity was to test the flow of the survey process and the sequence and the coherence of the research questionnaire. The valuable experiences gained from the pilot study were essential to the formation of the final version of the questionnaire. The following is a list of the feedback from the pilot survey:

- The questionnaire sequence could be more linked and smoother by adding some questions to relate one aspect with another. Smoothing the flow of the survey questionnaire would enable visitors to express their perceptions and opinions more easily;
- The questionnaire presentation and cover page needed to be more professional looking;
- Some specific terms, for example, types of accommodation available in the New Forest, should be in accordance with the terminology used by the New Forest District Council and other managing authorities in order to minimise visitors' confusion;

- Although the interviews were based on researcher-completion questionnaires, it might make the interviewees feel more comfortable if they could read the questionnaire with the researcher. Also, in so doing, potential confusion and misunderstanding can be limited;
- The estimated time to complete an interview ranged from five minutes to twenty minutes, depending on the characteristics of the visitors. For instance, first-time visitors who had just arrived at the site, their experiences of the New Forest were limited and therefore they were not be able to respond to many of the questions. On the other hand, interviewing repeat visitors, and those who had spent quite some time in the site when they were interviewed, the time needed to complete the survey was longer;
- The response rate was good. The main reasons for rejecting the opportunity to participate in the survey including: they were in a hurry to go to somewhere else; spouse/company/children were waiting in the car park; they have disabled or young age toddler company, thus it was not convenient to be interviewed; and, they did not want to be interviewed.

6.5.2.4 Sampling technique for the New Forest visitor survey

The constraints of available resources and the size of the New Forest meant that the strict random sampling technique would be impossible to apply to surveying visitors in the New Forest. Firstly, the target population cannot be assigned a number or a code, because they can enter and leave the New Forest from various points at anytime. In other words, the target population is not stationary but flows around the research site.

Nonetheless, the researcher attempted to apply probability sampling techniques but with compromises. In general, samples were selected in accordance with the principles of the systematic sampling technique suggested by Veal (1998). Given the constraints on assigning each subject in the target population a number and on determining sampling fraction n , the researcher adopted both researcher-stationary and researcher-

mobile methods to conduct the visitor survey. In the Tourist Information Centres where there is only one entrance/exit, the researcher stayed stationary and selected every n^{th} visitor passed by. In outdoor research locations such as picnic area, campsites and car parks, the researcher moved along a clock-wise route, and every n^{th} visitor the researcher encountered with would be selected.

The n is not a sampling fraction, but a pre-determined measure based on the conditions of visitor flow, seasonality, weather and research location on the day of the visitor survey. For instance, when the weather is cold and wet and the survey site is in the Tourist Information Centre, and during the peak seasons, the visitor flow into the Tourist Information Centre is constant. In such circumstances, the researcher decides that every 10th to be selected. Whereas during winter months, the researcher would select every 5th visitors because the visitor volume is less.

6.5.3 Determination of Data Collection

6.5.3.1 Information collected from the previous research

Three research reports were used to assist the development of the questionnaire, as well as to determine the sample size and research location. They are: Tourism in the New Forest 1991-1992 (ECOTEC Research and Consulting Ltd., 1992), 1994 All parks visitor survey: report of the survey in the New Forest (Centre for Leisure Research and JMP Consultants, 1995), and The New Forest sport and recreation study (Land Management Research Unit, University of Portsmouth, 1996). Publications from the New Forest managing organisations also provided essential information to the selection of research location in the site. Data from the publications produced by the New Forest managing agencies include car park statistics, distribution and bed spaces of campsites, and routes to the various locations in the New Forest.

According to the research of Tourism in the New Forest 1991-1992 carried out by the ECOTEC Research and Consulting Ltd. (1992), the number of visitors staying

overnight in the New Forest was estimated to be 410,000 in 1991. Hence, the population of New Forest visitors, including day-tripper and staying visitors, is definitely higher than 410,000. With this estimated size of target population of more than 100,000, in order to achieve $\pm 3\%$ precision level of 95 percent confidence interval, the required size of samples is 1,111. (Yamane, 1967) (See Appendix B).

The tourism activities in the New Forest is highly seasonal, and weekends are busier than weekdays, it was necessary to plan the survey process according to the fluctuation rather than simply spreading the survey throughout the year evenly. Overall, the seasonality is in accordance with the school holidays, especially in summer.

In general, local residents' uses of the New Forest are more consistent throughout the year (Land Management Research Unit, 1996). For excursionists and staying visitors, the low season stretches from late November to February, as the ground tends to be wet due to rain and short daylight hours. The famous New Forest ponies are more difficult to be seen in the winter months. Most of the campsites managed by the Forestry Commission in the New Forest are closed from October to the end of March. Nevertheless, Easter breaks and the two bank holidays in May usually attract day visitors and short holidaymakers (Forestry Commission, 1998).

The tourism high season in the New Forest spreads from the middle of June to the middle of September, and July and August are especially the peak months. It is the time when visitors are more likely to undertake longer holidays in the New Forest, and the bookings for the campsites during these few months are significantly higher than those in other months. From the middle of September onward, the Forest is less busy along with the decreasing of daylight and the falling of temperature. Therefore, the distribution of the sample should be in accordance with the seasonality throughout the year.

Based on the available information from the previous research (1994 All parks visitor survey, carried out by Centre for Leisure Research and JMP Consultants, 1995), the monthly distribution of required samples to be surveyed was planned as follows (See Table 6.6):

Table 6. 6: The monthly distribution of samples throughout 1999.

Month	% of proposed samples' monthly distribution (No. of proposed samples)	No. of samples actually surveyed
January	3.6% (40)	40
February	3.6% (40)	28
March	3.6% (40)	43
April	7% (78)	82
May	12% (133)	130
June	12% (133)	127
July	16% (178)	180
August	16% (178)	172
September	12% (133)	123
October	7% (78)	68
November	3.6% (40)	31
December	3.6% (40)	29

Proposed sample size 1,111
Actual number of samples surveyed 1,053

The 1994 All parks visitor survey (Centre for Leisure Research and JMP Consultants Ltd., 1995) indicated that, excluding local users, 80 percent of the excursionists to the New Forest were from neighbouring areas, including Southampton, Eastleigh, towns in east Dorset such as Bournemouth, Christchurch and Poole as well as those towns further afield such as Portsmouth, Gosport, Salisbury District, and Winchester. The remaining 19 percent of the excursionists came from other parts of the South East and South West regions, as well as Greater London. This finding reflects the fact that the convenient road networks and M3 and M27 motorways connect the New Forest with over fifteen million people within one and a half hours drive (Forestry Commission, 2001a; Land Management Research Unit, 1996).

In terms of staying visitors, more than half of them (53%) came from South East of England and Greater London areas, and 12 percent came from the South West regions. Both research conducted by ECOTEC (ECOTEC Research and Consulting Ltd., 1992) and the 1994 All parks visitor survey (Centre for Leisure Research and JMP Consultants Ltd., 1995) indicated that overseas visitors only accounted for a small percentage in their sample frame. In the ECOTEC research (ECOTEC Research and Consulting Ltd., 1992), just over half of the staying visitors stayed in self-catered accommodation, including camp sites (33%), holiday park (9%) and self-catering holiday flats or homes (12%). According to the 1994 all parks visitor survey (Centre for Leisure Research and JMP Consultants Ltd., 1995), more than seventy percent of their sampled staying visitors stayed in self-catering accommodation.

Moreover, the 1994 All Parks Visitor Survey (Centre for Leisure Research and JMP Consultants Ltd., 1995) showed that only four percent of the visitors used public transport to the New Forest. The ECOTEC research (ECOTEC Research and Consulting Ltd., 1992) also showed a similar finding.

Car parks in the Crown Lands of the New Forest, regardless of their size and facilities, are provided and managed by the Forestry Commission. There were 132 car parks in year 2000, and ten of them were with toilet facilities (Forestry Commission, 2001a, 2001b). The number of car parks may have changed since then as the Forestry Commission is constantly reviewing the location and the use of those car parks. In the past, some of the car parks were situated too close to sensitive sites and were therefore closed in order to prevent visitors' disturbance upon the resources. In other words, Forestry Commission uses the car parks as a management technique to direct visitor flow away from sensitive resources. According to the Forestry Commission's (1999) car park statistics up to 1997, the busiest car parks are Bolderwood, Bolton's Bench, Blackwater, and Hatchet Pond. These car parks are close to fairly robust areas and footpaths, tourism facilities such as toilets are also provided, and they are easily accessible from the main roads. Hence, these car parks were selected to be the research locations.

In total there are four Tourist Information Centres in the New Forest District; Ringwood, Fordingbridge, Lymington and Lyndhurst, nonetheless, only the Lyndhurst Tourist Information Centre is situated in the New Forest Heritage Area and is open all year round. It is funded and managed by the New Forest District Council, and is the busiest Tourist Information Centre in the New Forest - annual visitor numbers were estimated to be 350,000 (New Forest District Council, 1998). The Tourist Information Centres in Ringwood and Lymington are open between Easter and September, with estimated visitor numbers of 70,000 each. They are also funded and managed by the New Forest District Council. Fordingbridge Tourist Information Centre is also open between Easter and September, but its visitor numbers accounted much less than others, of 30,000 per year.

The Tourist Information Centres in Lyndhurst and Lymington were selected as two of the research sites to carry out the visitor survey, with the main focus placed upon the one in Lyndhurst. This is not only because it opens throughout the year and attracts 350,000 visitors annually, but the town is also located at the heart of the New Forest. The access to Lyndhurst from the South East region and Greater London, which is one of the primary New Forest visitor origins, is conveniently connected with M3 and M27 via A31 and A35, which makes it the first stop for many visitors.

The table below is a summary of the information collected from the previous research, including seasonality, visitor origins, and popular tourism spots in the New Forest (See Table 6.7).

Table 6. 7: Summary of secondary data from the previous research.

	Information subtracted from the available secondary data
Seasonality	<ul style="list-style-type: none"> • Low seasons – December to February • Middle seasons – March to mid June, and mid September to November, with occasional peak during Easter break, school half-term, and bank holiday weekend • High seasons – mid June through to mid September
Visitor origins	<ul style="list-style-type: none"> • Day visitors – 80 percent from nearby counties • Overnight stay holidaymakers – more than half were from South East England and Greater London
Popular tourism honey pots	<p>The common characteristics of these popular sites are large car parking area, tourist facilities, picnic/playing grounds and easy access. For example:</p> <ul style="list-style-type: none"> • Bolderwood • Blackwater • Burley • Wilverley Plain • Stoney Cross • Boltons Bench
Tourist Information Centres	<ul style="list-style-type: none"> • Lyndhurst - Open all year, 350,000 visitors per year • Ringwood - Open Easter - September, 70,000 visitors per year • Lymington - Open Easter - September, 70,000 visitors per year • Fordingbridge - Open Easter - September, 30,000 visitors per year

6.5.3.2 Primary data collection - visitor survey in the New Forest

The survey was firstly carried out in the Lyndhurst Tourist Information Centre during the first week of January 1999. Because of the seasonality the interviews conducted in winter months were mainly concentrated in the various Tourist Information Centres and village car parks. As mentioned earlier, except for the Lyndhurst Tourist Information Centre, other Tourist Information Centres operate on a seasonal basis. Hence, just over two thirds of the interviews undertaken in the Tourist Information Centres were carried out in Lyndhurst, and the rest were conducted in the Lymington Tourist Information Centres during the operation times.

Interviews with visitors in an outdoor environment were all conducted during the day light hours. Also, most of the interviews were carried out in the main tourist sites, for example, Bolderwood, Wilverley Plain, Boltons Bench, and Blackwater. This was due

to the constraints of available human and financial resources, therefore, smaller and less popular locations in the New Forest were less likely to be covered in the plan of survey locations. 193 interviews were undertaken in the Hollands Wood and Holmesley campsites during their opening seasons.

Interviews were concentrated during weekends and school half terms in accordance with the visitor flows. Based on the researcher's own experiences, even during summer months, the visitor flow during weekdays in the New Forest is not as busy as it is during weekends. The available secondary data lack the detailed information about weekly and daily fluctuation of visitor flow. Since the survey lasted for the whole year, the researcher moved around the New Forest during the year in order to observe the distributions of visitor numbers and the popular tourist locations in the site.

The most obvious evidence of visitor flow in the New Forest is the occupancy in the car parks. During weekdays most of the car parks in the New Forest as well as in the villages and towns are less crowded. In winter seasons, this situation is even more obvious. Moreover, the traffic flow in the road network in the New Forest is also an indicator of the fluctuation of visitor flow. In summer months, the traffic flow in the site is much busier than in winter months. Traffic congestion in some towns and villages in the New Forest, such as Lyndhurst and Burley, is not uncommon during summer weekends. Another useful indicator of the visitor flow is the visitors themselves. In high seasons, it is very easy to encounter a visitor in a car park or on a walk. For instance, the flow of systematically sampling a prospective visitor in the summer seasons was faster than in the winter months.

Therefore, in order to reflect seasonality and visitor flow more correctly, interviews were carried out more often in weekends, and more often between late morning and late afternoon in the summer and between mid day and mid afternoon in winter (in accordance with the daylight hours). The researcher recognised that such distributions of survey sites, dates and time might have caused some bias to the research because it was not based on accurate statistics of visitor flow and seasonality. Nevertheless,

given the limitations of available resources and secondary data, the distributions of the survey process should be reasonably sound.

The table below is the distribution of the New Forest visitor survey, including the survey sites and number of interviews carried out, and the seasonal distribution of the surveys (See Table 6.8).

Table 6. 8: The distribution of the survey of visitors in the New Forest.

Research site	No. of interviews – low season *	No. of interviews – high season †	Total
TICs – Lyndhurst, Lymington	Lyndhurst – 197 Lymington – Nil	Lyndhurst – 54 Lymington – 44	
Bolderwoods	48	137	
Blackwater	N/A	106	
Wilverley Plain	N/A	115	
Boltons Bench	70	120	
Hatchet Pond	N/A	68	
Hollands Wood Campsite	N/A	54	
Holmesley Campsite	N/A	40	
Total	315	738	1,053

*: Low season includes the months of from January to April, and October to December

†: High season includes the months from May to September

The sampling technique used during the actual survey process was systematic sampling, same as used during pilot studies. The typical survey process is, in the case of indoor interviews carried out in Tourist Information Centres, where the researcher stood by the entrance, every tenth visitor or visitor group passed by the researcher was chosen as sample in high season. If they declined to participate in the research, the researcher moved on to the next visitor or visitor group that passed by. In outdoor settings, the sampling method was to follow a circular route and to interview every fifth visitor with whom the researcher encountered along the way. The survey route started from the left of the entrance of a car park, marking a circular route to cover the site until back to the starting point. The main reason of adopting such systematic sampling approach in accordance with seasonality was that it allowed the researcher to

stretch out the survey over a longer period of time. In the indoor settings, in peak months, if interval was too small, for example, every third, the interviews might be concentrated within a period of two to three hours. On the other hand, if the interval was too large, it might be difficult to complete targeted number of surveys for a particular day, this is especially the case of winter months.

The researchers' personal experiences gained from conducting the visitor survey in the New Forest throughout the year of 1999 were outlined below. These thoughts stemmed from the researcher's observation and interactions with the participants in the New Forest. These thoughts are not research findings, instead, they are the general information of the survey that may be of use for future research.

- Visitor flows tended to concentrate during weekends, regardless summer or winter seasons;
- In summer months, outdoor surveys in general were easier to carry out than indoor surveys, probably visitors did not want to be kept in the Tourism Information Centres but want to go outdoor to enjoy themselves;
- When the weather was not ideal for outdoor activities, for example, raining or chilly, indoor surveys were relatively easy to carry out. Moreover, in such an instance, Tourist Information Centres may be crowded with stranded visitors;
- In Tourist Information Centres, lunch hours usually were busier than morning hours.
- Indoor surveys were not necessarily easier to conduct, since many visitors were hurry in and out of the Tourist Information Centres;
- Coach-tour visitors usually did not intend to participate in interviews as their length of stay in a particular location in the New Forest was limited;
- Occasionally, participants' children were interested in being included in the survey. These school age children provided the researcher valuable information with regards to their thoughts of the interpretation activities they would like to participate in, which was not expected by the researcher prior to the carrying out of the survey.

Below is the summary of the determination of research design and data collection procedures:

- Research style - Theory test approach research;
- Secondary data collection - Literature review and information from the previous research;
- Questionnaire design - Mainly closed questions, but researcher would have the opportunity to explore further when necessary; five-point Likert scale is used when applicable, where 1 indicates the least/very negative and 5 indicates the most/very positive;
- Primary data collection - Questionnaire-based, researcher completion on-site face-to-face interview with visitors;
- Selection of research locations - Lyndhurst and Lymington Tourist Information Centres, Bolderwood, Blackwater, Boltons Bench, Wilverley Plain, Hollands Wood and Holmesley campsites;
- Sample size – 1,111 proposed number of samples to be surveyed; 1,053 samples were actually surveyed;
- Monthly distribution of samples - See Table 6.5;
- Sampling technique – systematic sampling method;
- Pilot studies – pre-test of questionnaire wording and piloting of the questionnaire and sampling technique were carried out in April and August 1998 respectively, and valuable experiences gained were helpful to improve the final version of the survey questionnaire;
- Actual survey of visitors of the New Forest was carried out from January 1999 and throughout to December (See Appendix D the Questionnaire of the New Forest Visitor Survey).

6.5.4 Determination of Data Analysis Procedure

A total of 1,053 visitor surveys were carried out during the calendar year of 1999, of which 315 were conducted in the low seasons, from January to April, and from

October to December. These interviews accounted for 30 percent of the total surveys. The remaining 738 interviews, or 70 percent of the total surveys, were carried out between May and September. The research findings were analysed by computerised statistical programme, SPSS.

The basic information collected is the frequencies and the measures of central tendency and variability, in other words, the descriptive statistics (Coakes and Steed, 1999). Frequency distribution provides a description of the characteristics of the samples. For example, the number and percentage of the first-time visitor amongst the total survey participants; and the number and percentage of staying visitors who chose to stay at campsites. For categorical variables, such as type of accommodation, activities undertaken, interpretive media used, transportation mode and sex, frequencies are useful to present the distribution of the samples' characteristics.

Nonetheless, when they are continuous variables, frequencies lack the ability to identify the central tendency and dispersion of responses accurately. Research questions involved with Likert scale are coded as a continuous variable, that is, samples' responses range from one to five continuously along the five-point Likert scale. The measures of central tendency and variability, such as means, mode, range, standard deviation and variance, assists the frequencies to draw up a more precise picture of the participants' responses to various issues and aspects. The mean shows the weight of the responses to a particular issue on the scale, and the standard deviation and variance demonstrate the dispersion of these responses to the mean.

These different statistical analysis techniques can be divided into two main groups: for exploring the relationship among variables (for instance, between age and preferences of holiday destination), and for exploring the differences between groups (for example, sex differences and preferences of holiday destination) (Pallant, 2001). A research project often requires employing a combination of various statistical analysis methods, depending on the nature of the research questions and the data collected. In this research of the New Forest visitors, besides the frequencies and the general

statistical information, the researcher also used chi-square, t-test, one-way ANOVA, correlation and regression to analyse the research findings.

6.5.4.1 Statistical techniques for exploring relationships

These methods are used to test the strength of the relationship between variables. Depending on the characteristics of the variables, different types of methods are applied. For instance, when the variables are of continuous types, various types of correlation methods and multiple regression are used. When the variables are categorical, chi-square is more appropriate.

Chi-square

The Chi-square analysis method is a non-parametric technique. It is used when the variables are of categorical. There are two types of chi-square tests: the chi-square for goodness of fit (also referred to as one-sample chi-square), and the chi-square test for independence (Pallant, 2001; Coakes and Steed, 1999).

The chi-square for goodness of fit applies to the analysis of one categorical variable. It explores the proportion of cases that fall into the different categories of a single variable and compares these with the hypothesised values. For example, the researcher would like to know whether the staying visitors have significant differences in their choices of their accommodation in the New Forest. This method was used to test if the research finding shows a significant difference towards a particular type of accommodation.

The chi-square test for independence is used to determine if two categorical variables are related. In other words, it explores the relationship between these two variables. For instance, this type of chi-square can be used to test if there is significant difference amongst the sampled staying visitors' geographical origin of residences and their choices of accommodation in the New Forest.

Pearson correlation

Pearson correlation is used to explore the strength of the relationship between two continuous variables. Pearson correlation coefficients (r) ranges from -1 to +1, where the minus and plus sign indicates whether there is a negative correlation (as one variable increases, the other decreases), or a positive correlation (as one variable increases, so too does the other). A correlation of 0 indicates no relationship between the two variables (Coakes and Steed, 1999; Pallant, 2001). For instance, Pearson correlation can be used to determine the strength of the relationship between visitors' perception of the physical conditions of tourism facilities and their overall satisfaction of their visits to the New Forest.

Multiple regression

Multiple regression is based on correlation but allows a more sophisticated exploration of the interrelationship among a group of variables (Pallant, 2001; Yamane, 1967). It is used when independent variables (predictors) are correlated with one another and with the dependent variable (Coakes and Steed, 1999).

6.5.4.2 Statistical techniques for exploring differences between groups

When the research questions are to find out whether there is a statistically significant difference among a number of groups, analysis methods are often involved with the comparison of the mean scores for each group on one or more variables (Pallant, 2001).

T-test

T-tests are used when there are two groups, for instance, male and female, excursionists and staying visitors, or when there are two sets of data, for instance, before and after, and wanting to compare the mean scores on some continuous

variables. There are two types of t-tests: paired sample t-test and independent samples t-test. Paired sample t-test is also termed repeat measures, it is used to examine the changes on scores tested at time one, and again at time two. Often research of testing the samples' changes in specific issues before and after a particular intervention or event employs t-test. The samples are the same each time they are tested. Independent samples t-test, on the other hand, is used when there are two groups of samples and the research interests are to examine the differences between the two groups. For instance, in the research of New Forest visitors, independent samples t-test can be used to examine whether excursionists and staying visitors' perceptions of the effectiveness of printed media are different the two groups (Pallant, 2001; Wright, 1997)

One-way analysis of variance (ANOVA)

When comparing mean scores on a continuous variable from more than two groups of samples, the analysis of variance, or ANOVA, procedure is used to examine whether there are differences among these groups (Pallant, 2001; Wright, 1997). The heart of ANOVA test is the notion of variance (Coakes and Steed, 1999). There are various types of ANOVA procedures: one-way ANOVA and two-way ANOVA. One-way analysis of variance is similar to t-test, but is used to compare more than two groups. One-way ANOVA can be used to test the differences on the mean scores of the same samples of different times (repeat measures), as well as to compare the mean scores from independent samples. One-way ANOVA of independent samples can be applied to test whether visitors from different geographical origin have different perceptions of the effectiveness of the directorial information (such as signs).

SUMMARY

A research project requires a scientific approach in each step during the study in order to produce high quality, convincing findings. In this chapter, the procedure of research of social science, from types of research to data collection methods, was discussed and applied to the research of New Forest visitors. In so doing, the researcher provided the

background of the research: the formation and procedure of the study of the New Forest, and the experiences learned during the data collection process. The last section of the chapter was a simplified introduction of the statistical analysis techniques that would be used to test the hypotheses and to fulfil the research objectives. The findings are presented in the next chapter.

CHAPTER SEVEN

RESEARCH FINDINGS AND DISCUSSION

INTRODUCTION

This chapter examines the research findings and their implications with respect to the literature review explored during the previous chapters.

1,053 visitors were sampled throughout the calendar year of 1999. Using the available secondary data, the researcher attempted to reflect the tourism flows in the New Forest by carrying out the survey in accordance with the seasonality of the site (See Chapter Six). The size of the New Forest Heritage Area is large, and the access to the New Forest is convenient to visitors through an extensive link of road networks. Inevitably, these factors contribute to the difficulty of assessing the annual visitor number to the site. The available secondary data provided unclear figures in their estimates of the annual visitor number and their usage of the New Forest. This raises difficulties to the researcher's own determination of the probable annual visitor number to the New Forest because of the inconsistent use of measurement in the previous research projects.

Following the determination of the visitors' usage per annum to the New Forest, the researcher developed a profile of New Forest visitors. More importantly, this research attempts to determine the factors that influence the intention to behave in a particular manner, and the role that persuasive communication and interpretation plays in influencing behaviour. The implications of the research findings for the management of the tourism resources are discussed throughout the chapter. In so doing, the tourism activity in the New Forest is presented by way of the profile of the visitors and its management.

7.1 THE ESTIMATION OF ANNUAL VISITOR USAGE OF THE NEW FOREST FOR RECREATIONAL PURPOSES

Before any discussion takes place relating to the main research findings, it is necessary to explain the determination of the sample size for the population of visitors to the New Forest. This was a difficult task given the lack of consistent data regarding visitor numbers and the types of visitors to the New Forest.

7.1.1 The Estimation of Number of Visitor Days Contributed by Day Visitors (excursionists) to the New Forest

In the report of “Tourism in the New Forest 1991-1992” carried out by ECOTEC, they estimated 7.15 million visitor days were spent in the New Forest annually (ECOTEC Research and Consulting Ltd., 1992). Furthermore, in the “1994 All Parks Visitor Survey – Report of the Survey in the New Forest” (carried out by the Centre for Leisure Research and JMP Consultants Ltd., 1995) an estimate of 6.6 million visitor days to the New Forest in 1994 was reported. Subsequent research, conducted by the Land Management Research Unit, Portsmouth University (1996) to assess sport and recreational usage per annum in the New Forest, did not attempt to provide independent evidence of the annual number of visitors but instead, suggested that 18 million visits per annum are made by the residents living within 30 minute drive from the New Forest – this figure seems to differ significantly from the other two research results. Nonetheless, it is worth noting that the research carried out by the Land Management Research Unit (1996) used different units of measurement to estimate usage of the New Forest. The figure 18 million was the number of “visits” made by residents living within a 30 minutes drive from the New Forest. According to their research findings, the people, especially those that reside within the New Forest District, tend to make frequent use of the New Forest for their recreational activities, although their length of stay at the site tend to be shorter than other type of visitors.

The "Tourism in the New Forest 1991-1992" report estimated 7.15 million days per annum were spent in the New Forest by visitors, and they provided the following breakdown (ECOTEC Research and Consulting Ltd., 1992):

- Staying visitors in serviced accommodation - .5 millions days
- Staying visitors in self-serviced accommodation - 2.25 millions days
- Day visitors – 2.2 millions days
- Local recreational users – 2.2 millions days

The ECOTEC research drew a distinction between local recreational users and day visitors. Their definition of "local recreational users" is the people residing within the New Forest District who were using the New Forest Heritage Area as a recreational resource. The population of the New Forest District was about 165,000 in the mid 1990s, and was forecasted to reach 170,000 by 2000 (Land Management Research Unit, 1996; New Forest District Council, 2002). There is every indication that this forecast target was reached and probably exceeded. Day visitors, on the other hand, were on a day trip to the New Forest Heritage Area from their home or from accommodation located outside of the New Forest District. Furthermore, they estimated that approximately 2.7 million were spent by approximately 610,000 overnight staying visitors in the New Forest District. However, they suggested that a significant proportion of the staying visitors (43%) made more than one visit to the site in any one year. Therefore, after taken this into account, the ECOTEC Research and Consulting Ltd. (1992) suggested that 412,000 visitors stayed overnight in the New Forest District.

However, there is inconsistent use of terminology relating to the number of visitors, number of visits and number of visitor days in the research of "Tourism in the New Forest 1991-1992" carried out by the ECOTEC Research and Consulting Ltd. (1992). These different terms were used interchangeably in their report, however, these terms in fact indicate very different aspects of tourism activities in a given destination. In the ECOTEC report, the definition of overnight staying visitors was clear, that they are the visitors who spent at least a night in the New Forest District. Hence, the researcher felt

that the figures they estimated in terms of the number of overnight staying visitors and the number of days these visitors spent in the New Forest were more credible than their estimation of the usage of the New Forest by day visitors and local users.

The “1994 All Parks Visitor Survey” estimated that there were 6.6 millions annual visitor days which could be broken down into the following categories (Centre for Leisure Research and JMP Consultants Ltd., 1995):

- Visitors using their private vehicle from outside the New Forest – 6.2 million visitor days
- Visitors using public transport from outside the New Forest – 0.2 million visitor days
- Visitors using other mode of transport from outside the New Forest – 0.024 visitor million days
- New Forest Heritage Area residents – 0.2 million visitor days

Moreover, the “1994 All Park Visitor Survey” provided the break down of their estimates of visitor days by private motor vehicle (6.2 million visitor days):

- Day visits from home – 2.6 million visitor days
- Holiday days from outside the New Forest – 1.6 million visitor days
- Holiday days from inside the New Forest – 2 million visitor days

The “1994 All Parks Visitor Survey” defines the “day visitor” as “ someone who has travelled to the New Forest from their home and will return home the same day, including New Forest Heritage Area residents”. “Holiday Day” is defined as “ a single day (or part day) spent in the New Forest by a holidaymaker”. In addition, “visitor day” is defined as “a day visit to the New Forest from home or a holiday day spent in the New Forest by someone staying inside or outside it” (Centre for Leisure Research and JMP Consultants Ltd., 1995, p. vii).

The research of The New Forest Sport and Recreation Study conducted by Land Management Research Unit of the Portsmouth University (Land Management Research Unit, 1996) criticised the previous research on the grounds that it may have underestimated the usage of the New Forest by local residents, because the previous

studies were carried out in tourism peak months and the research locations were of high-profile tourist honey-pots. Therefore, they set out two separated surveys, “a Local Towns Survey” and “an Informal Recreational Site Survey”, to tackle the data collection on the usage of low profile sites in the New Forest and in particular, of local residents. The study carried out by the Land Management Research Unit, Portsmouth University (1996), did not provide a definitive estimate of the annual number of visitors or the number of visitor days contributed by all visitors. Nevertheless, they estimated that the number of visits to the New Forest made by the local residents may be as many as 18 million visits per annum.

It is necessary to stress that in the “Local Towns Survey” of this study, “local residents” are defined as people who reside within a 30 minutes drive from the New Forest. Thus, residents of East Dorset, such as Bournemouth and Poole, Southampton and the Salisbury District are categorised as “local”. The “Local Towns Survey” was designed to target the New Forest District residents as well as people living in the neighbouring area to estimate their recreational use of the New Forest (Land Management Research Unit, 1996). Their research findings suggest the people living within 30 minutes drive from the New Forest use the site for recreational purposes on a regular basis, that as many as two-thirds of them come to the New Forest at least once a week:

- 16% - daily
- 6% - 4-5 times a week
- 21% - 2-3 times a week
- 23% - once a week
- 12% - once a fortnight
- 14% - once a month
- 8% - less frequent

However, these people’s length of stay in the New Forest in general is short, some 57% of the sampled local residents spent less than 2 hours in the New Forest to carry out their recreational activities. 36% of the respondents claimed to spend half a day,

and 7% of the local users said that they spent a whole day to carry out their activities in the New Forest.

Based on the suggested 18 million visits made by the people live within 30 minutes drive from the New Forest, their total duration of stay in the site is 2.35 million visitor days:

$$(18,000,000 * 57% * 2 \text{ hours}) + (18,000,000 * 36% * 4 \text{ hours}) + (18,000,000 * 7% * 8 \text{ hours}) = 56,520,000 \text{ hours}$$

$$56,520,000 \text{ hours} / 24 \text{ hours} = 2,355,000 \text{ visitor days}$$

This figure of 2.35 million visitor days derived from the study carried out by the Land Management Research Unit of the Portsmouth University (1996) is similar to the figure suggested by the "1994 All Parks Visitor Survey". In the "1994 All Parks Visitor Survey", they suggested 80% of the day visits (2.6 million visitor days in total), excluding residents of the New Forest Heritage Area, were made by residents in the nearby towns of the New Forest, such as Southampton/Eastleigh area and Bournemouth/Christchurch/Poole area. In other words, combining the visitor days made by residents in the New Forest Heritage Area and people living within easy access to the New Forest, they contributed nearly 2.3 million visitor days:

$$(2,600,000 * .8) + 200,000 \text{ visitor days (made by NF Heritage Area)} = 2,280,000 \text{ visitor days}$$

Hence, the researcher can confirm that the New Forest is a popular site for people reside in the surrounding area to carry out recreational activities. The New Forest catchment area include cities, towns and villages in Test Valley and West Hampshire, including Winchester, Southampton City and Eastleigh area, Portsmouth, Gosport, East Dorset, including Bournemouth, Christchurch and Poole, Salisbury District, and the New Forest District. People residing in this region benefit from the easy access to the New Forest, which enables them to carry out frequent visits, and their usage of the site may account for as many as 2.35 million visitor days per annum.

Furthermore, other day visitors may spend another approximately 2.2 million days in the New Forest. Based on the "1994 All Parks Visitor Survey", the remaining 20% of the 2.6 million visitor days were made by visitors from farther away, and 46% of the holiday days (3.6 million in total) were spent by holiday makers who stay overnight outside the New Forest but come to the site during the day. Hence, the number of visitor days spent by these visitors is:

$$2,600,000 * .2 + 3,600,000 * .46 = 2,176,000 \text{ visitor days spent by other day visitors}$$

According to the research of The New Forest Sport and Recreation Study conducted by Portsmouth University (Land Management Research Unit, 1996), in the late 1980s the traffic monitors in the major car parks in the New Forest estimated day visitors to the New Forest to be between 7 and 9 million, and since then, the number of day visitors has, according to the researchers, stabilised (with an annual increase of 2%, compared with the annual increase of 12% experienced in the 1970s). Furthermore, the convenient access to the site from major metropolitan and cities in the South of England means the volume of day-visitors per annum in the New Forest is high.

7.1.2 The Estimation of Number of Overnight-Stay Visitors and the Number of Visitor Days They Contributed

Based on these secondary data, the researcher attempted to estimate the number of visitors who stay overnight in the New Forest. The usage of the New Forest for recreational purposes made by holiday makers were discussed earlier, that in the "1994 All Parks Visitor Survey", 3.6 million visitor days were made by holiday makers staying inside or outside of the New Forest were suggested (Centre for Leisure Research and JMP Consultants Ltd., 1995). Of these 3.6 million visitor days, 54% were spent by visitors staying overnight inside the New Forest, which is:

$$3,600,000 * .54 = 1,944,000 \text{ visitor days}$$

The research also provided the breakdown of those holidaymakers who stayed overnight in the New Forest:

- 36% - 1-3 nights
- 45% - 4-7 nights
- 16% - 8-14 nights
- 4% - 15 nights or more

Therefore, the number of visitors who stayed overnight in the New Forest based on the data suggested by the Centre for Leisure Research and JMP Consultants Ltd. (1995) was approximately 550,000:

$$\begin{aligned}
 &1,944,000 * .36 / 2 \text{ nights} = 349,920 \\
 &1,944,000 * .04 / 15 \text{ nights} = 5,184 \\
 &1,944,000 * .16 / 11 \text{ nights} = 28,276 \\
 &1,944,000 * .45 / 5.5 \text{ nights} = 159,054 \\
 &349,920 + 5,184 + 28,276 + 159,054 = 542,434
 \end{aligned}$$

Furthermore, the research carried out by the ECOTEC Research and Consulting Ltd. (1992) estimated 2.75 million visitor days were spent by approximately 412,000 overnight staying visitors in the New Forest District. Hence, the researcher felt confident to suggest that the number of visitors who stay overnight in the New Forest may be as many as 550,000.

Combining with the number of visitor days spent by the day visitors, visitors who reside within and nearby to the New Forest, and the staying visitors, the total number of visitor days contributed by all visitors may be as many as 7.25 million days:

$$\begin{aligned}
 &2.3 \text{ million days spent by visitors living within and nearby to the New Forest District} + 2.2 \text{ million} \\
 &\text{days spent by other visitors} + 2.75 \text{ million days spent by overnight staying visitors} = 7.25 \text{ million days}
 \end{aligned}$$

Considering the New Forest is situated within one and a half hours' drive of 15 million people (Forestry Commission, 2000), the usage of the New Forest for recreational

purposes is unlikely to decrease. Regardless of whether these visitors are excursionists or staying visitors, local residents or outsiders, the pressure of demand for recreational purposes on the New Forest resources is high and is likely to continue to be so for the foreseeable future. Therefore, appropriate strategies of visitor management are essential to ensure the long-term satisfactory use of the site for outdoor activities.

7.1.3 Definitions of Staying Visitors, Excursionists and Local Residents in the Research

The WTO defines a domestic tourist as "a traveller visiting a destination in his country of residence for at least 24 hours but less than one year for the purposes of recreation, holidays, sport, business, meetings, conventions, study, visiting friends or relatives, health, mission work, or religion". Moreover, a domestic excursionist is "a visitor travelling in his country of residence for any of the reasons given for tourists, but who stays less than 24 hours at the destination" (WTO, 1981, cited from Smith, 1989, p. 20). On the other hand, international visitor is defined as "an individual entering a country that is not his usual place of residence and who is not:

- Intending to emigrate or to obtain employment in the destination country;
- Visiting in the capacity of a diplomat or a member of the armed forces;
- A dependent of anyone in the above categories;
- A refugee, nomad, or border worker;
- Going to stay for more than one year.

But who is or may be:

- Visiting for purposes of recreation, medical treatment, religious observances, family matters, sporting events, conferences, study, or transit to another country;
- A crew member of a foreign vessel or aircraft stopped in the country on a lay-over;
- A foreign commercial or business traveller staying for less than one year, including technicians arriving to install machinery or equipment;

- An employee of international bodies on a mission lasting less than one year, or a national returning home for a temporary visit.

(WTO, 1981, cited from Smith, 1989, p. 19).

International visitors are then divided into international tourists and international excursionists:

International tourists are the visitors who spend at least one night in accommodation in the destination country. International excursionists are the visitors who do not spend at least one night in accommodation in the destination country. These include visitors who are passengers on board cruise ships who may visit the same port of call over a period of several days but who return to the ship to sleep. International excursionists do not include in-transit passengers such as airline passengers who may touch down in a country but do not enter by clearing customs (WTO, 1981, cited from Smith, 1989, p. 19, 20).

The above definitions for domestic tourist/excursionist and international visitor provide some foundation for classifying the types of visitors in the research. 1,053 visitors which made up the sample of visitors to the New Forest used in this research, were interviewed mainly in the New Forest Heritage Area but some were also interviewed in the villages of the New Forest District such as Lymington and Ringwood throughout the year of 1999. The terms of excursionists and staying visitors are used in the discussions that follow. Excursionists are those visitors who come to the site for various purposes for a day or less. They do not stay overnight in the New Forest, instead, they will return home or to their accommodation outside the New Forest District boundary after their visit. Staying visitors, on the other hand, are visitors who visit the site and stay within in the New Forest District Area for at least one night. Their accommodation may vary, ranging from serviced accommodation such as hotels, to self-catering accommodation like campsite and holiday flats. This method of separating excursionists from staying visitors does not discriminate against visitors' purpose of visiting the Forest, their usual residence (with regards to

"international" or "domestic"), or their accommodation types, but is based on whether or not they stayed in the New Forest over night.

Visitors who were categorised as local users are those residing in the New Forest District. This is because the majority of the New Forest Heritage area is situated within the boundary of the New Forest District, and access from the villages in the District to the Heritage Area is highly convenient. According to the secondary data, the population in the New Forest Heritage Area was approximately 38,000 in 1991 (Forestry Commission, 1998), whilst the population in the New Forest District being a much larger area and encompassing some of the more populated towns and villages was estimated to be around 170,000 in 1999 (New Forest District Council, 2002b). Towns and villages situated in the District but outside the New Forest Heritage Area include Ringwood, Fordingbridge, Lymington, High Cliff, New Milton, Totton and Hythe. The secondary data show that the residents in these towns and villages contribute enormously to the annual usage of the New Forest because of their convenient access to the site. Appendix A is the Map of the New Forest that provide a clear view of the locations of these villages and the relative distances to the Heritage Area, the research site. Hence, it is more logical to categorise the residents in the District as local users.

On the other hand, visitors whose residences were outside the New Forest District boundary and their hotel accommodation was located outside the New Forest District, were not considered as staying visitors but excursionists, regardless of their purposes of visit to the New Forest. Thus, for example, a visitor to the New Forest who was on holiday in the South of England and stayed in a Bed and Breakfast in Bournemouth was considered to be an excursionist. An individual whose residence was outside of the New Forest District came to visit their family who live in the village of Ashurst, or Brockenhurst, or Lymington, was categorised as excursionist, providing their stay was for less than 24 hours. If these VFR visitors stay overnight at their family or friends, they were classified as staying visitors.

Among the 1,053 sampled visitors, 63 of them were the New Forest District residents. Also, 309 of the samples were on their first visit to the site. The table below shows the number of local and non-local repeat visitors' frequency of visits to the New Forest (See Table 7.1).

Table 7. 1: The breakdown of local and non-local repeat visitors' frequencies of visiting the New Forest.

Frequency of visiting the New Forest	No. of local repeat visitors	No. of non-local repeat visitors
At least once a month	60	109
Between 6 and 10 times per annum	2	67
Between 3 and 5 times per annum	0	99
Between 1 and 2 times per annum	0	204
In frequent, less than 1 visit per annum	0	203
Total number of repeat visitors - 744	62	682

7.2 BACKGROUND OF THE SAMPLED VISITORS

7.2.1 Demographic Background of the Sampled Visitors

7.2.1.1 Gender

Among the total sampled visitors, there were slightly more males than females (52.5% and 47.5% respectively).

7.2.1.2 Age

Just over 45% of the total sample were between 26 and 40 years old. Visitors whose ages were between 41 and 60 years accounted for just over 20% of the total sample. People who were aged over 61 years accounted for 17%, and visitors who were younger than 15, and between 15 and 25 years accounted for 0.9 % and 16% of the total sample, respectively.

7.2.1.3 Economic status

More than 60% of the sampled visitors were engaged in full-time paid work. In relation to the above description of the age group of the samples, 17% of them were aged 61 years and over, 16% of the visitors recorded that their economic status was retired. 7% of the samples were working on part-time paid jobs, and 5% were full-time home/child care. Those who were undergoing full-time education accounted for just 8%, and 1% was either unemployed or looking for paid employment.

The table below provides the summary of the above demographic characteristics of the total sampled visitors (See Table 7.2).

Table 7. 2: The demographic characteristics of the sampled visitors.

Demographics	Number of visitors	Percentage
Gender		
Male	553	52.5%
Female	500	47.5%
Total	1,053	100%
Age		
Under 15	9	.9%
15-25	170	16.1%
26-40	480	45.6%
41-60	219	20.8%
Over 61	175	16.6%
Total	1,053	100%
Economic status		
Full-time paid work	665	63.2%
Part-time paid work	74	7%
Full-time home/child care	50	4.7%
Full-time education	86	8.2%
Retired	166	15.8%
Unemployed or looking for paid employment	12	1.1%
Total	1,053	100%

7.2.1.4 Geographical origins of the sampled visitors' residences

According to the available secondary data, the majority of the excursionists to the New Forest were from nearby counties, including Greater London, Hampshire and East Dorset. These data also show that more than half of the staying visitors were residents in the South East of England, including Greater London (Centre for Leisure Research and JMP Consultants, 1994). In other words, residents in the South of England contribute a significant proportion of the total number of visitors to the New Forest annually.

In spite of the fact that the previous research suggested that local residents did not seem to be one of the main sources of visitors to the New Forest, the frequency of their visits to the site should not be overlooked. They are likely to visit the New Forest for recreational activities such as walking and cycling regularly, even on a daily basis. In addition, the survey carried out in the earlier research tended to focus on the tourist "honey-pots" of the site, and was confined to the peak season. Thus, the New Forest District residents were, to some extent, overlooked by the previous survey, because they might avoid these crowded "honey-pots" during the peak season but undertake their usual recreational activities in less visited locations (Land Management Research Unit, 1996).

In this research, the frequencies show that more than eighty percent of the total visitors interviewed were from the counties and cities in the South of England (See Table 7.3). Almost 36 percent of the total visitors were from the counties in the South East of England, such as Hampshire, Sussex, Surrey, Oxfordshire, Buckinghamshire, and Berkshire. In addition, six percent of the total visitors were New Forest District locals. The analysis confirms that there is a significant difference in visitors' geographical origins. The distribution of sampled visitors' geographical origin shows that residents in the South East and South West of England, and Greater London were the main source of New Forest visitors. Hence, the research findings are consistent with the previous research.

It is necessary to point out that "international visitors" are those visitors whose usual residence is not in the UK but came to visit the New Forest for the reasons that are categorised as international visitor (See above section of WTO's definitions). Among the 12 international visitors, 9 of them stayed overnight in the New Forest District (in other words, they are "staying visitors" in the discussion that follow, unless specific stated otherwise). 3 of the international visitors did not stay overnight within the New Forest District boundary but returned to their accommodation outside of it, hence they are "excursionists" in the following discussion unless particularly stated otherwise.

Table 7. 3: New Forest visitors' geographical origin distribution.

Region	Number of visitors	% of the total samples
North East of England	7	.7%
North West of England	18	1.7%
Yorkshire and Humberside	23	2.2%
West Midland	33	3.1%
East Midland	31	2.9%
East of England	50	4.7%
South West of England	212	20.1%
South East of England (excluding Greater London and NF District locals)	377	35.8%
Greater London	212	20.1%
New Forest District local	63	6.0%
Scotland	7	.75
Wales	8	.8%
International visitors	12	1.1%
Total	1,053	100%

7.2.1.5 Visitor's household composition

The sampled visitors' household composition was categorised into the following five groups:

- Singles without children
- Couples without children

- Singles with children
- Couples with children and
- Living with parents.

Among the total sampled visitors, just over a quarter of them were single, and 2% of the samples were living with parents. 25.6 % of the total visitors fell into the category of “couples with children”, and the percentage of visitors in the category of “couple without children” was 46% (See Figure 7.1).

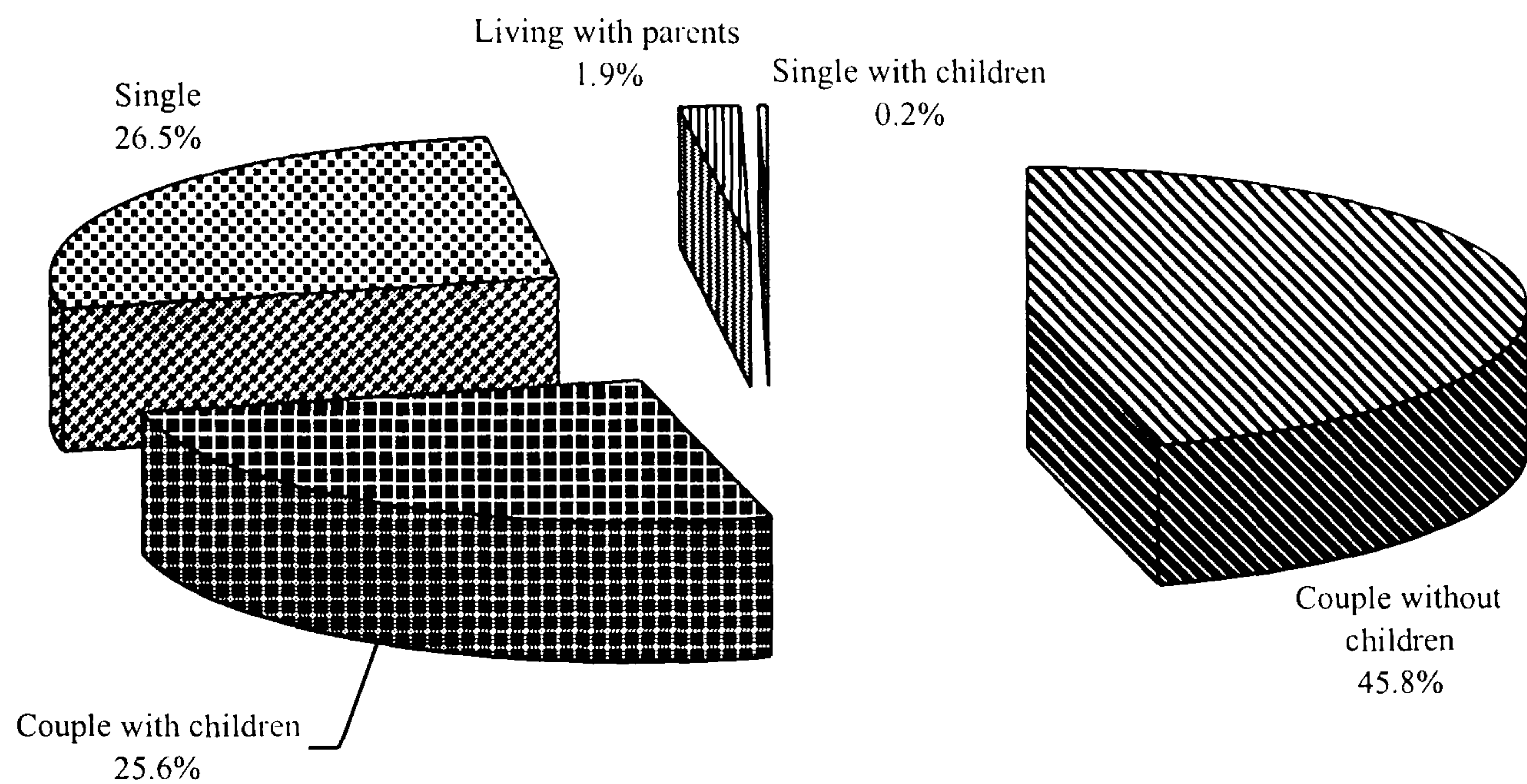


Figure 7. 1: The percentage of the sampled visitors' household composition (total visitor number 1,053).

7.2.2 General Information of the Sampled Visitors

7.2.2.1 Number of staying visitors and excursionists, and visitors' purposes of visiting the New Forest

Of the 1,053 sampled visitors, 462 (43.9%) were staying visitors, and the remaining 591(56.1%) were excursionists. Moreover, the majority of the sampled visitors came to the site to carry out recreational activities, either for a day out or for a holiday. The

table below shows the basic statistical information of staying visitors and excursionists' by their purpose of visit (See Table 7.4).

Table 7. 4: Visitors' purposes of visiting the New Forest on the day of the survey.

Visitor category	Purpose of visit	No. of visitors	% within category	% within total visitors
Staying visitors	For holiday	455	98.5%	43.2%
	Pursuing special interest	7	1.5%	.66%
Sub total		462	100%	43.9%
Excursionist	Day visit	527	89.2%	50%
	Shopping	1	.17%	.09%
	Pursuing special interest	4	.68%	.38%
	For holiday	58	9.8%	5.5%
	Other	1	.17%	.09%
Sub total		591	100%	56.1%
Total		1,053		

In the group of staying visitors, 7 of them were school pupils from Brighton who came to the site to pursue special interest activities: the Duke of Edinburgh Endurance Award. It is necessary for them or the school to obtain permission from the Forestry Commission prior to the pursuit of the Duke of Edinburgh Award.

In the group of excursionists, visitors who came to the Forest with special interests were school pupils looking for information about the New Forest for school projects, a parent looking for Forest information for their children, and a tour guide from Wiltshire wanting to search for specific information about Godshill in the New Forest. They were interviewed in the Tourist Information Centre in Lyndhurst, which suggests that the Tourism Information Centres serve as a focal point for information gathering. These Tourist Information Centres, especially the one in Lyndhurst, are often the first stop for many visitors to the site, especially those on their first visit.

Nearly half of the staying visitors chose to stay in campsites, and just over a quarter of them stayed in Bed and Breakfast. Referring to the available bed space in the New

Forest in Chapter Five (See Table 5.6), the campsites and caravan sites contain up to 80% of the available bed space within the New Forest, although most of the sites are open on a seasonal basis. Thus, the finding that half of the staying visitors chose to stay at campsites is not surprising (See Figure 7.2).

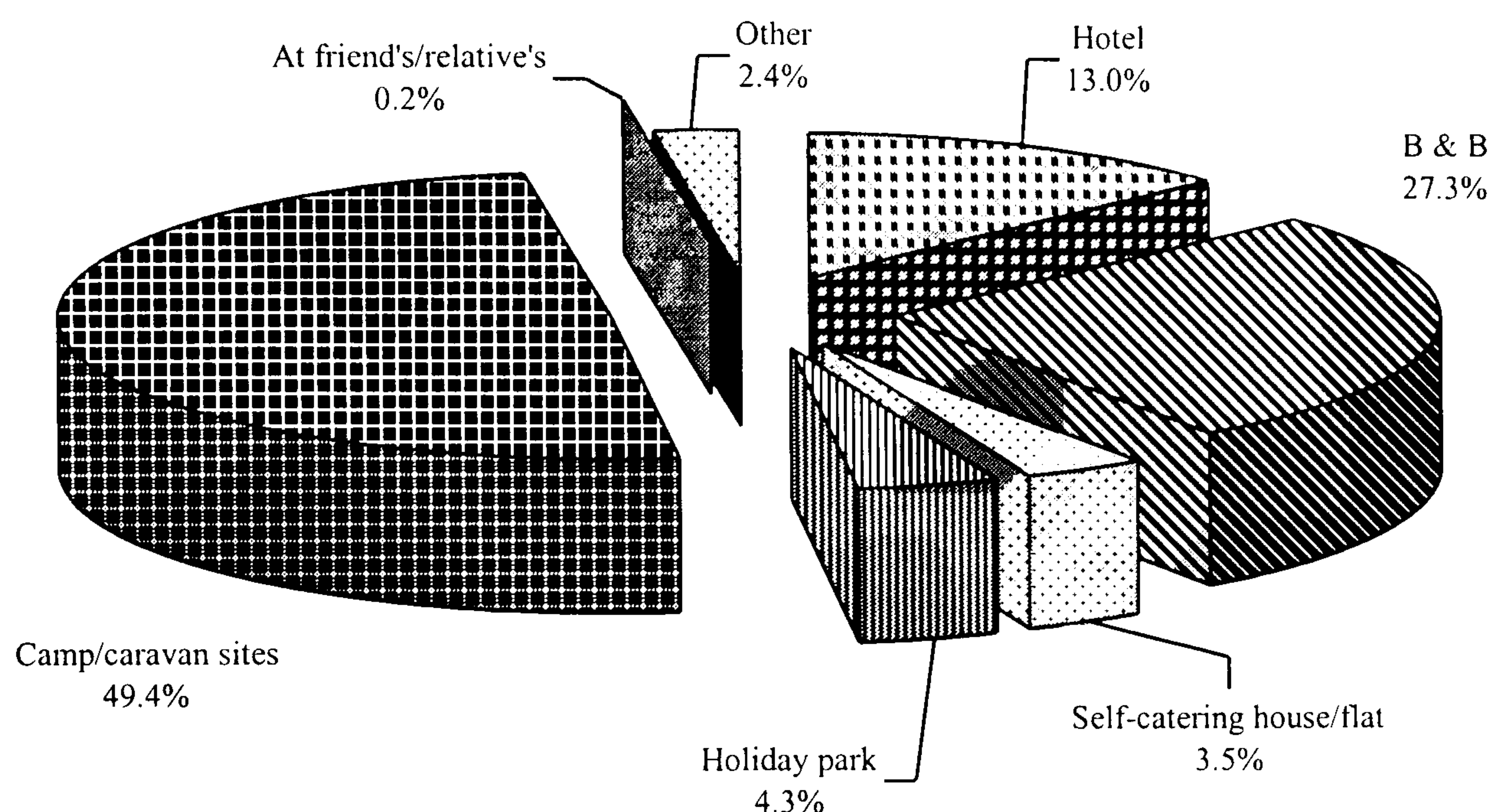


Figure 7. 2: Staying visitors' choices of accommodation (sample size 591).

7.2.2.2 First-time and repeat visitors

First-time visitors accounted for 29.3% of the total visitor numbers (309 out of 1053). Among these first-time visitors to the New Forest, 64.4% of them were staying visitors and 35.6% were excursionists.

The main reason for the repeat visitors to come to the New Forest is for carrying out recreational activities, either for a day trip or for holiday. Other reasons for repeat visiting the New Forest on the day when the visitors were sampled include "I like the New Forest", "visiting family and/or friends in the region", "I live locally or nearby" and "it is easy accessible to come to the New Forest" (See Table 7.5).

Table 7. 5: Repeat visitors' reasons for coming to the New Forest on the day of survey.

Reason for coming to the New Forest	No. of visitors	Percentage
For recreational purposes	305	41%
I like the New Forest	225	30.2%
Visiting family and/or friends in the region	20	2.7%
I live locally/nearby	83	11.2%
It is easy accessible to come to the New Forest	84	11.3%
I passed by/through the area so decided to stop by (spontaneous decision)	8	1.1%
For special interests	6	.8%
Other	13	1.7%
Total	744	100%

Looking into the relationship between the repeat visitors' frequencies of visiting the New Forest and their geographical origins of their residences, the research shows that those who frequent the New Forest tend to live in the South of England (See Table 7.6).

Table 7. 6: The frequencies of repeat visitors' geographical origins of their residences and their number of visits to the New Forest annually.

Region (no. of visitors)	Frequencies of visit to the New Forest annually (no. of visitors and % within region)				
	More than 10 times	6-10 times	3-5 times	1-2 times	Less than once
NE of England (3)	0	0	0	2 (66.7%)	1 (33.3%)
NW of England (11)	0	0	1 (9.1%)	3 (27.3%)	7 (63.6%)
Yorkshire and Humber (13)	0	1 (7.7%)	0	5 (38.5%)	7 (53.8%)
West Midland (19)	0	0	2 (10.5%)	6 (31.6%)	11 (57.9%)
East Midland (15)	1 (6.7%)	0	0	3 (20%)	11 (57.9%)
East of England (28)	0	2 (7.1%)	5 (17.9%)	16 (57.1%)	5 (17.9%)
SW of England (176)	56 (31.8%)	32 (18.2%)	28 (15.9%)	36 (20.5%)	24 (13.6%)
SE of England (exc. Greater London and New Forest District) (287)	45 (15.7%)	26 (9.1%)	50 (17.4%)	89 (31%)	77 (26.8%)
Greater London (118)	7 (5.9%)	6 (5.1%)	13 (11%)	41 (34.7%)	51 (43.2%)
New Forest District Local (62)	60 (96.8%)	2 (3.2%)	0	0	0
Scotland (3)	0	0	0	0	3 (100%)
Wales (2)	0	0	0	1 (50%)	1 (50%)
International visitors (7)	0	0	0	2 (28.6%)	5 (71.4%)

7.2.2.3 Visitor's group composition and number of group members

More than 60% of the sampled visitors came to the site with their family members, and 21.7% of the visitors visited the New Forest with their friends, including colleagues, and 11.5 percent of the samples their group consisted of family and friends. Two percent of the samples came to the site with an organised party, and less than one percent of the total visitors came to visit the New Forest on their own. This finding of visitor group composition reflects what other tourism researchers have suggested, that a very small number of visitors carry out tourism activities on their own but with others, often with family or friends or a combination of the two.

The table below provides a summary of the sampled visitors' group composition and the number of members in their group (including the samples themselves) (See Table 7.7).

Table 7. 7: Sampled visitors' group composition and number of members in their visitor group, including themselves.

Visitor group composition and number of members	No. of visitors	Percentage
Visitors' group composition		
Family group	671	63.7%
Friends, including colleagues	228	21.7%
Family and friends	121	11.5%
Organised party	25	2.4%
I am on my own	8	.8%
Total	1,053	100.0%
Number of members in your group, including yourself		
2-5	889	84.4%
6-10	113	10.7%
11-15	24	2.3%
16 or more	19	1.8%
I am on my own	8	.8%
Total	1,053	100.0%

7.2.2.4 Mode of transportation

The private car is the prime transportation mode among the sampled visitors, with 85% of them using their own vehicles to come to the site, and 8 percent came by caravan or campervan. Similar percentages visitors, 2.2% and 2.4% respectively, came to the site by coach and train. Only a very small number of the visitors came to the site by bus, on foot or by bicycle. These frequencies suggest that visitors, including local residents, coming to the New Forest heavily rely on their own vehicles (See Figure 7.3).

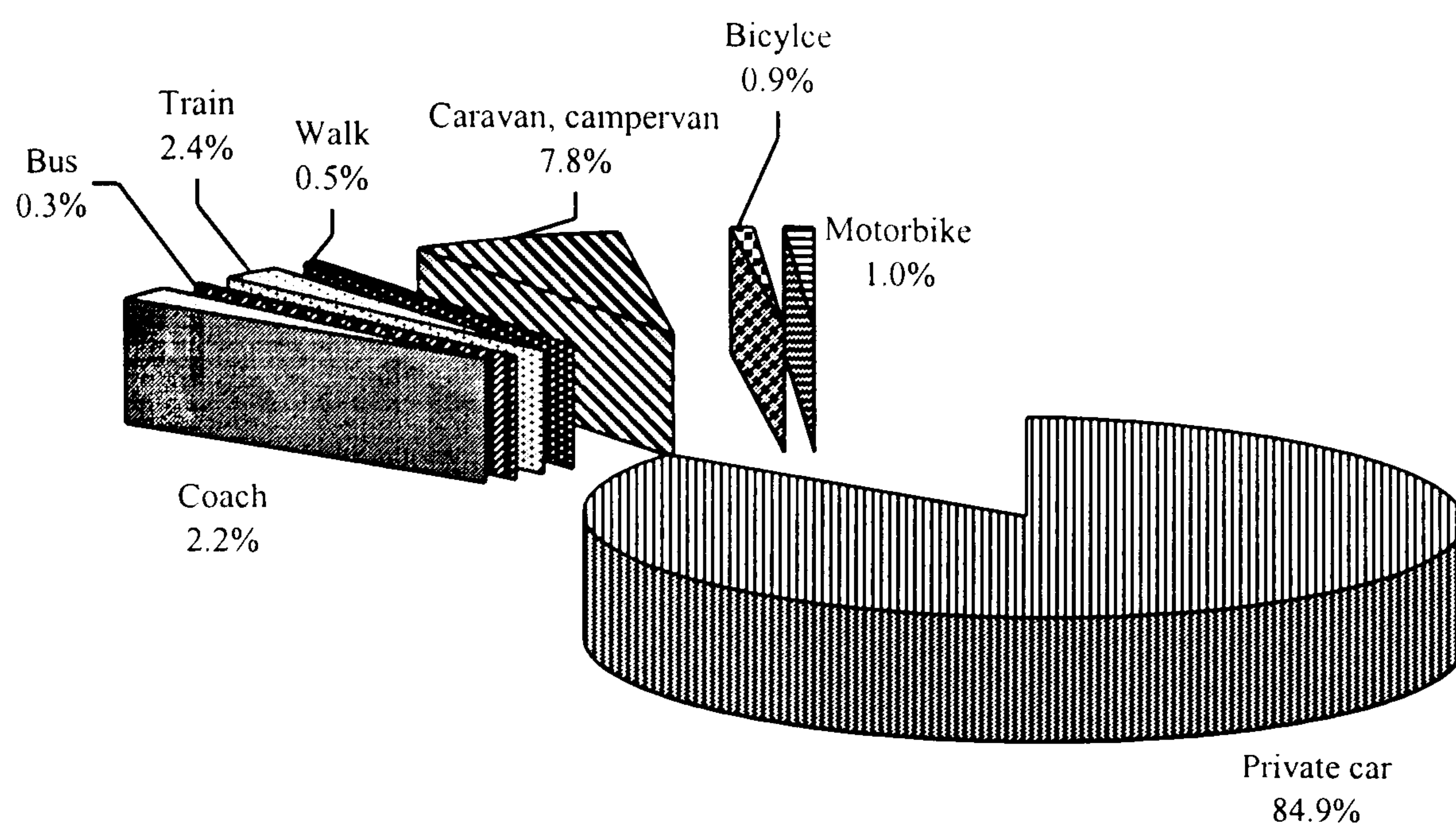


Figure 7. 3: The percentage of the sampled visitors' modes of transportation to come to the site.

7.2.3 Visitors' Time Lapse between Decision-making and Visiting the New Forest

Visitors' decisions relating to visiting a tourism destination are likely to be influenced by several factors, such as their financial ability, time availability, distance of travel to the site, preference towards the site, and the possible alternative sites for a particular destination. The New Forest, given the facts that it is situated in the highly populated South East of England and easily accessible via an extensive link of road networks, is an ideal site to carry out a wide range of recreational activities for the residents in the region. Furthermore, the New Forest has had human influences such as timber production and farming throughout the centuries, it is, in fact, safe and comfortable to visit and does not require specific equipment for visitors to undertake the popular activities. Unlike those remote wilderness destinations such as some national parks in the North America, or destinations with harsh weather or travel conditions such as Snowdonia National Park in Wales, a desert or the Australian Outback, the New Forest is within easy reach and is suitable for most of the general public to carry out

recreational activities. Hence, it is a destination where people can visit with only short planning and decision-making processes, at least this is the case for the residents in the South of England. The sampled visitors were asked when they made their decision of visiting the New Forest, and the figure below shows the percentage of the results (See Figure 7.4).

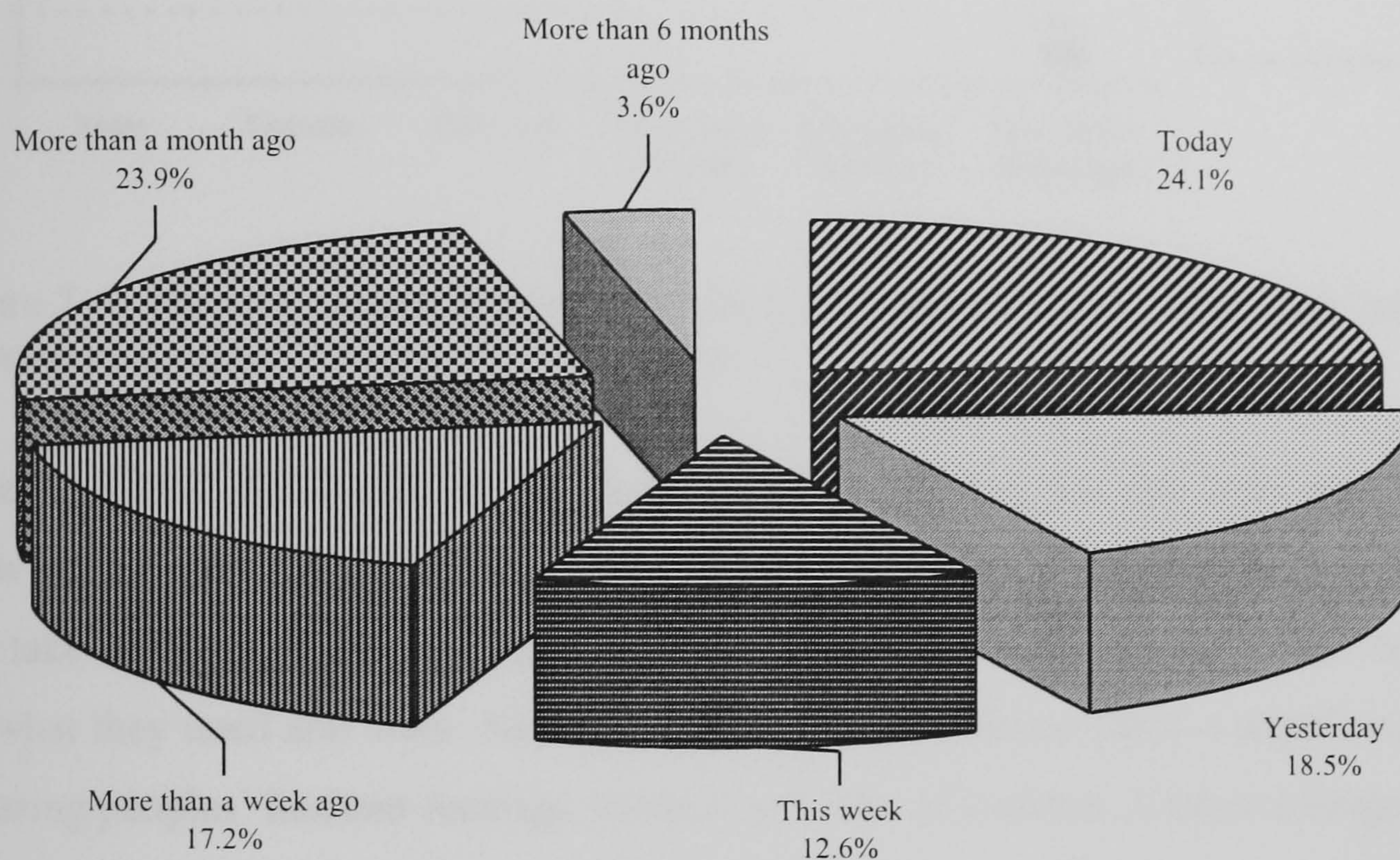


Figure 7. 4: The percentage of the sampled visitors' decision making of visiting the New Forest (sample size 1,053).

7.2.3.1 The differences between repeat and first-time visitors' time lapse between decision making and visiting to the New Forest

The research shows statistically significant differences in first-time and repeat visitors' time lapse from decision making and visiting to the New Forest. In general, repeat visitors' decisions of visiting the site were made much closer to their journey to the site whilst first-time visitors seemed to have a longer time lapse between their decision-making and visiting to the New Forest (See Figure 7.5).

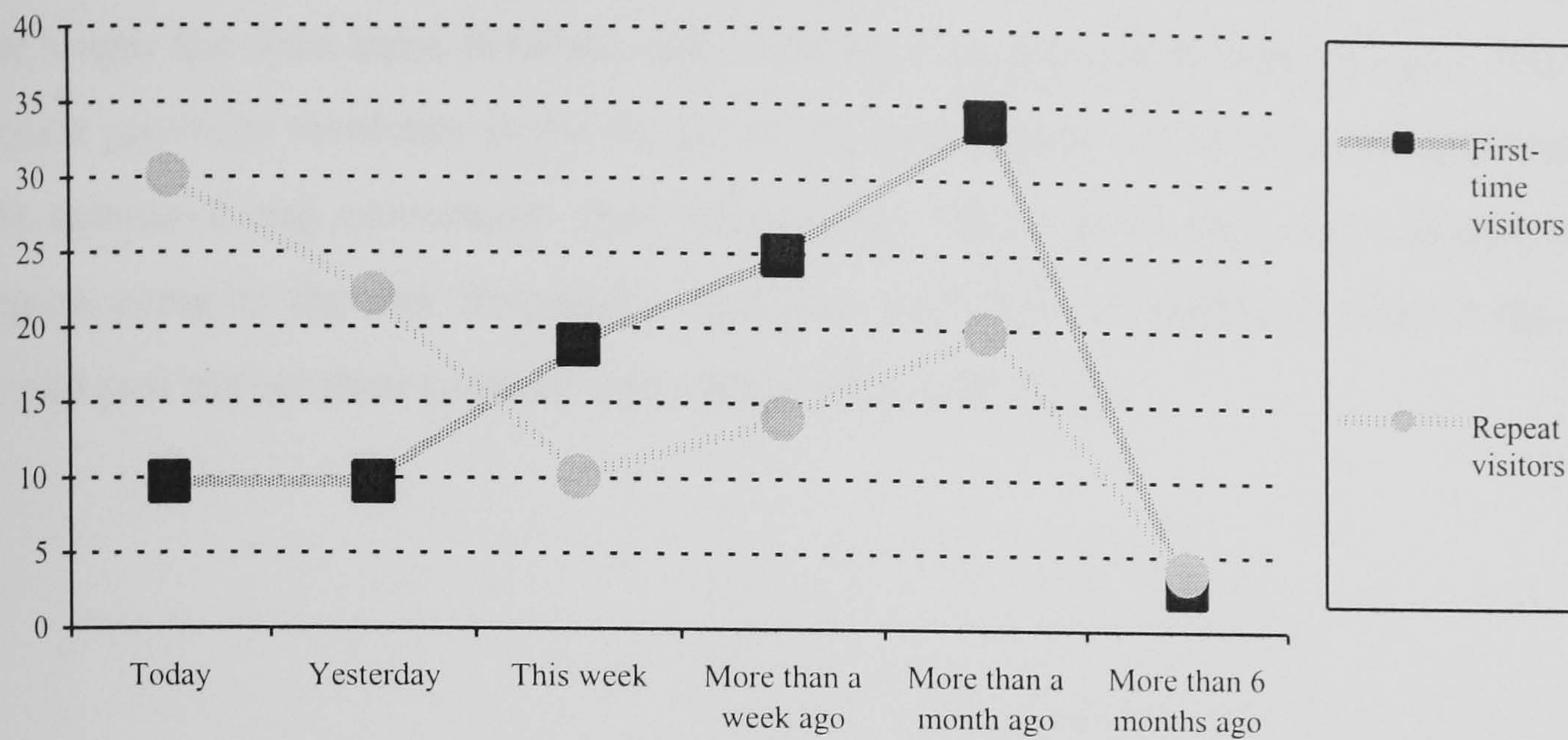


Figure 7. 5: The comparison between first-time and repeat visitors' time lapse between decision making and visiting the New Forest.

Repeat visitors' familiarity of the site make them visiting the site with ease - they know how to get there, how long it will take them to arrive at the site and how long it will take from one location to another, what to expect, what to do, and where to look for what they need and want. Such familiarity of a destination plays a significant role in easing peoples' hesitant feelings, worries and fear. In contrast, it takes a longer time for first-time visitors to prepare and plan before they embark for an unfamiliar destination.

In the case of the New Forest, visitors' familiarity affects the time lapse between decision making and visit to the site, other factors such as whether they would stay overnight in the New Forest, the geographical origins of their home residence are also likely to have influences on the decision lag.

7.2.3.2 The differences between visitors' geographical origins of their residence and their time lapse between decision making and visiting the New Forest

The analysis also shows statistically significant differences in the relationship between visitors' geographical origins of their residences and the time lapse between their

decision-making and visiting to the New Forest. In general, the farther away they live, the longer the time lapse between their decision making and visiting the site. The New Forest provides residents in the South of England plenty of recreational opportunities via extensive and convenient road access: the results show that many people in the region come to the site frequently, and they are likely to decide to visit to the New Forest just before their journey takes place (See Table 7.8).

Table 7. 8: The relationship between visitors' geographical origins of their residences and their time lapse between their decision making and visiting to the site.

Region (no. of visitors)	When the decision of visiting the New Forest was made (no. and % of visitors within the region)					
	Today (254, 24.1%)	Yesterday (195, 18.5%)	This week (133, 12.6%)	More than a week ago (181, 17.2%)	More than a month ago (252, 23.9%)	More than 6 months ago (38, 3.6%)
NE of England (7)	0	0	0	0	3 (42.9%)	4 (57.1%)
NW of England (18)	1 (5.6%)	0	2 (11.1%)	1 (5.6%)	12 (66.7%)	2 (11.1%)
Yorkshire and Humber (23)	0	0	0	6 (26.1%)	17 (73.9%)	0
West Midland (33)	1 (3%)	4 (12.1%)	6 (18.2%)	11 (33.3%)	11 (33.3%)	0
East Midland (31)	2 (6.5%)	1 (3.2%)	6 (19.4%)	6 (19.4%)	12 (38.7%)	4 (12.9%)
East of England (50)	3 (6%)	3 (6%)	4 (8%)	15 (30%)	20 (40%)	5 (10%)
SW of England (212)	60 (28.3%)	59 (27.8%)	24 (11.3%)	30 (14.2%)	39 (18.4%)	0
SE of England (377) (exc. Greater London and NF District)	93 (24.7%)	81 (21.5%)	45 (11.9%)	63 (16.7%)	74 (19.6%)	21 (5.6%)
Greater London (212)	43 (20.3%)	38 (17.9%)	43 (20.3%)	43 (20.3%)	43 (20.3%)	2 (5.3%)
New Forest District (63)	50 (79.4%)	8 (12.7%)	3 (4.8%)	0	2 (3.2%)	0
Scotland (7)	0	0	0	0	7 (100%)	0
Wales (8)	0	0	0	3 (37.5%)	5 (62.5%)	0
International visitors (12)	1 (8.3%)	1 (8.3%)	0	3 (25%)	7 (58.3%)	0

7.2.3.3 The differences between visitors' purposes of visiting to the New Forest and their time lapse of decision making and visiting the site

The finding shows statistically significant differences in the staying visitors and excursionists' time lapse between decision making and visiting to the New Forest.

More than 40% of the staying visitors made their decision more than a month prior to their visiting to the New Forest, and more than 30% of them decided more than 1 week before their journey took place. In contrast, more than 40% of the excursionists decided to come to the New Forest on the same day of their visits to the site, and 30% of them made the decisions the day before their trip to the site (See Figure 7.6).

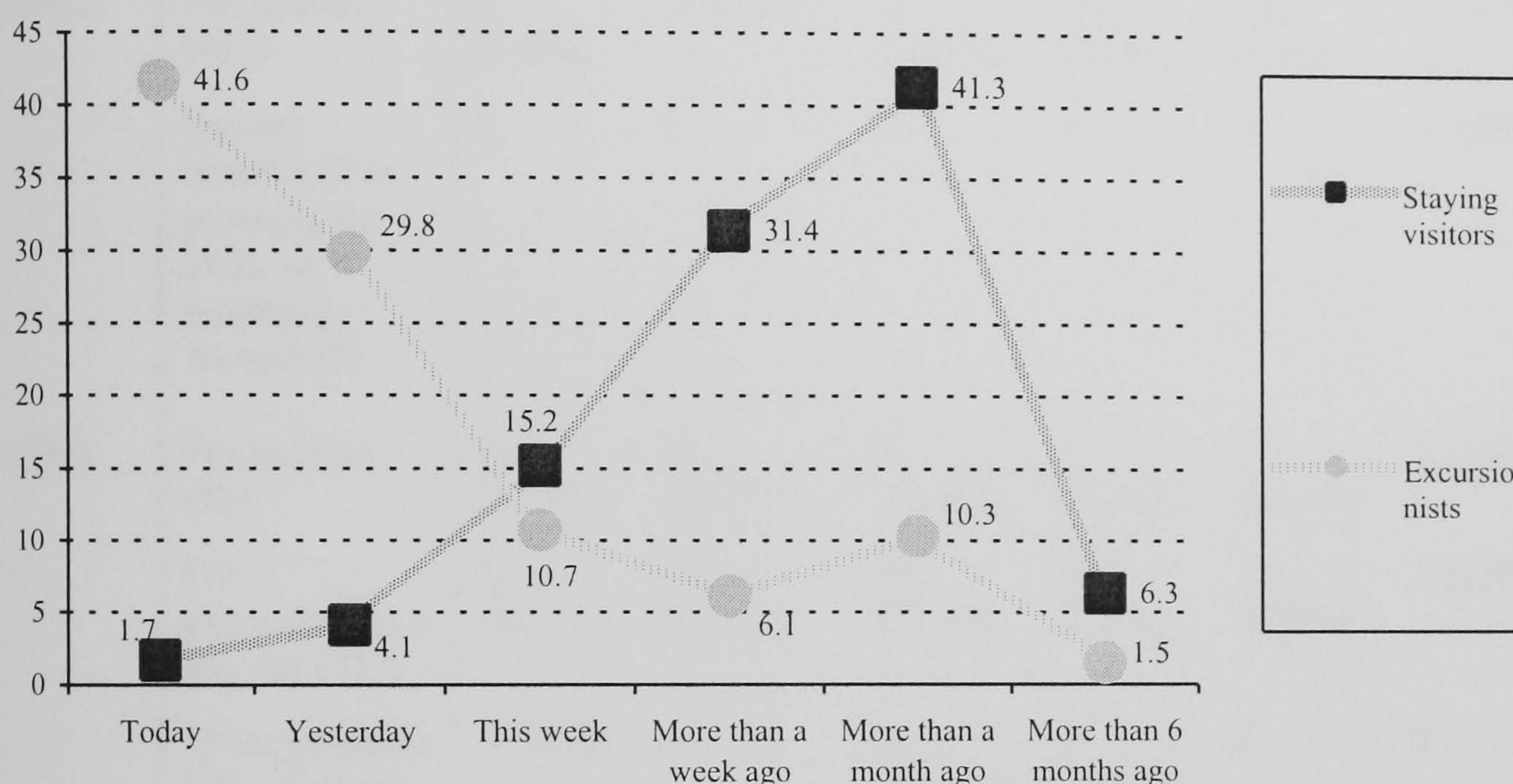


Figure 7. 6: When the decision of visiting the New Forest was made - the comparison between staying visitors (462) and excursionists (591).

Wanting to stay overnight in a tourism destination usually requires prior planning and booking for accommodation. Therefore, staying visitors tend to decide their visits to a destination earlier than excursionists do. Taking into account the factors of visitors' purpose of visit and whether they would stay overnight in the New Forest, the results show consistency with the earlier discussion, that holiday makers, especially those that stayed overnight in the site, tended to have a longer time lapse between their decision-making and visits to the site (See Table 7.9).

Table 7. 9: The relationship between visitors' purposes of visiting the New Forest and their time lapse between decision making and visiting to the site in accordance with whether they would stay overnight in the site.

Staying overnight in the New Forest (no. of visitors)	Purposes of visiting the New Forest (no. of visitors)	When the decision of visiting the site was made (no. and % of visitors within "the purposes of visiting of the New Forest")					
		Today	Yesterday	This week	More than a week ago	More than a month ago	More than 6 months ago
Yes (462)	For holiday (455)	8 (1.8%)	19 (4.2%)	70 (15.4%)	145 (31.9%)	191 (42%)	22 (4.8%)
	Special interests (For pursuing the Duke of Edinburg Award) (7)	0	0	0	0	0	7 (100%)
No (591)	For holiday (58)	10 (17.2%)	10 (17.2%)	8 (13.8%)	3 (5.2%)	25 (43.1%)	2 (3.4%)
	For excursion/for a day out (527)	233 (44.2%)	166 (31.5%)	54 (10.2%)	31 (5.9%)	36 (6.8%)	7 (1.3%)
	Other purposes (inc. shopping, looking for information for school project and voluntary work) (6)	3 (50%)	0	1 (16.7%)	2 (33.3%)	0	0

Those visitors on holiday but who did not stay overnight in the New Forest were on holiday in the South of England, and some of them made the instant decision of visiting the site when they were in the area. Therefore, it is clear that the time required travelling to the site plays an important role in determining the visitors' decision-making processes. When the travelling time is shorter visitors' decisions relating to visiting the site are inclined to be made with a brief time lag. This proves that the perceived convenience, that is, the shorter travelling time to the destination, influences visitors' decision-making processes. Such phenomenon is common. For instance, residents of Bournemouth are likely to make spontaneous decisions to go to the beach, whilst people living in the North of England would need more time to plan their journey to Bournemouth and book for their accommodation. This reflects the time and

money “investment” that is needed to make such a journey. While visitors are undertaking holiday in the region, they may decide to have a detour to Christchurch, Poole and the New Forest using the same perception of “investment” cost.

To summarise, visitors' decision-making processes are influenced by several factors, including the distance required to travel to the New Forest and type of visitors (i.e., first-time or repeat visitors, and staying visitors or excursionists). The degree of influence from these factors towards visitors' time lapse of decision-making process varies. The findings show that, except for international visitors and New Forest District residents, the distance required to travel to the site is the main factor that influences the remaining samples' time lapse between their decision-making and their visits to the New Forest. International visitors and the New Forest District residents were not included in such analysis because their distance of travel to the site is considerably different in comparison with other visitors. Hence, in order to explore whether the required travel distance to the site has influences on visitors' decision-making processes, these outliers (international visitors and the New Forest District local residents) were excluded in this particular analysis.

Among the three factors, namely travel distance to the New Forest, whether they are first-time visitors and whether they are excursionists or holidaymakers staying overnight in the New Forest, they explained 43.0% of the variance in visitors' time lapse of decision-making and visiting the site. The analysis shows that although they all have influences on visitors' decision-making processes, the required travel distance to the site has the highest contribution towards the time lapse between decision-making and visiting the site, followed by whether they would stay overnight in the site or just a day trip, and whether the sample is first-time visitor (See Table 7.10).

Table 7. 10: Summary of analysis - Dependent variable: time lapse between decision making and visiting the New Forest. Predictors: Distance to Lyndhurst from home, staying overnight in the New Forest or not, first time visit or not.

Model Summary ^b					
Model	R	R ²	Adjusted R ²	Std. Error of the estimate	
1	.657 ^a	.431	.430	1.20	
ANOVA ^b					
Model	Sum of Squares	df	Mean square	F	Significance
1 Regression	1059.132	3	353.044	246.411	.000 ^a
Residual	1395.494	974	1.433		
Total	2454.626	977			
Coefficients ^a					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Significance
	B	Std. Error	Beta		
1 (Constant)	5.722	.195		29.282	.000
Distance to Lyndhurst	5.259E-03	.001	.217	8.730	.000
First visit	-.179	.086	-.052	-2.082	.038
Staying overnight in the NF	-1.785	.080	-.562	-22.273	.000
a: Predictors: (Constant), staying overnight in the NF, Distance to Lyndhurst, first-time visit					
b: Dependent variable: Time lapse between making decision and visiting the NF					

This finding suggests that firstly, the New Forest will remain a main recreational site for residents in the South of England region because of the easy accessibility to the site. Moreover, the short distance between the New Forest to the beaches in New Milton, High Cliff, Christchurch and Bournemouth may also contribute the popularity of the New Forest, especially in summer months. That is, visitors may combine the New Forest and other seaside resorts in their travel plan, in addition, holidaymakers in these seaside areas may have a detour to the New Forest during their visits to the seaside towns. Furthermore, the site-managing agencies should take into account when promoting special events in the site, since the time required to travel to the New Forest and the booking for accommodation in the site both have influence on visitors' decision-making processes. Such marketing materials relating to events in the New Forest need to be publicised well in advance in the regions farther away from the New Forest in order to familiarise the potential visitors with the site and the events. From

the visitors' point of view, such information enables them to arrange the necessary travel plan accordingly.

7.2.4 Visitors' Sources of Information about the New Forest as a Tourism Destination

The New Forest as a tourism destination is considered to be well known by the British population, regardless their geographical regions of their residences. This is because that since the 11th century the New Forest was declared as the new royal hunting ground by King William, in other words, the New Forest has been seen as being a provider for recreational activities over the centuries. Furthermore, since the 1960s, private car ownership has increased considerably, domestic tourism became affordable for the general public. Since then, the popularity of the New Forest as a tourism destination where one could undertake holiday as well as day visit has not dwindled.

Referring to the concept of consumer buying behaviour, a consumer can search and acquire information of a product from three difference sources: personal sources, commercial sources and public sources. Commercial sources include advertising, sales people, dealers, displays and packaging, and public sources include reviews, articles in newspaper and magazines, and organisations offering consumer rating. Family members, friends, acquaintances and neighbours are categorised as personal sources of a consumer. It is believed that generally, consumers receive most information about a product from commercial sources. However, the most influential sources tend to be personal. Commercial sources inform the consumer, but personal sources legitimise or evaluate the product for them (Kotler et al, 1996).

In the case of the New Forest, as discussed previously, it is well known by the British because of its historical importance. Therefore, the source of information about the New Forest as a "place" exists in British history. People learn about the site from schools, stories and televised documentary programmes. To some visitors, personal sources may play a more important role as a source of information that the New Forest

as a “tourism destination”. These personal sources are likely to offer information relating to activities that may be carried out in the site, commercial attractions to visit, commercial services such as accommodation providers, shops and pubs, and directorial information of routes and time required travelling to and around the area. Regardless of the accuracy of the personal sources of information, people might be more inclined to believe in personal sources because the given information has been tested and evaluated by someone whom the particular individual knows personally. In other words, information obtained from personal sources has the appeal of being legitimised.

The frequencies show that more than three quarters of the sampled visitors already knew of the New Forest as a tourism destination for carrying out holidays and day visits. More than 15% of the samples responded that they heard that the New Forest was worth visiting via word of mouth, and a small number of the visitors had read articles about tourism in the New Forest in newspapers or magazines (See Figure 7.7).

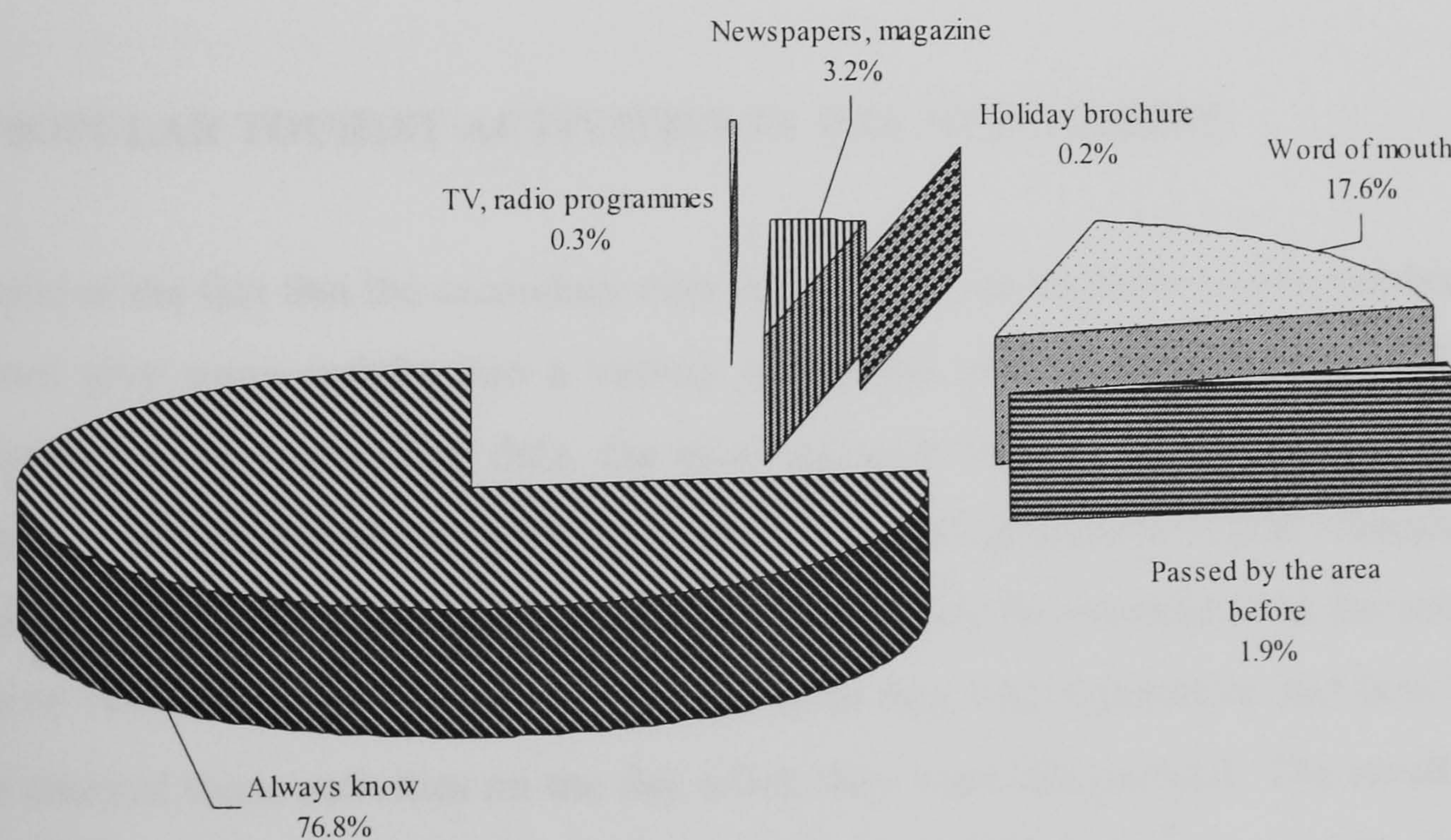


Figure 7. 7: The percentage of the sampled visitors' source of information of the New Forest as a tourism destination.

7.2.4.1 First-time visitors' sources of information of the New Forest as a tourism destination

The frequencies show that although nearly 40% of the first-time visitors have always known that the New Forest is a tourism destination, 47% of them replied that they were told by family or friends that the site is worth visiting and undertaking tourism activities. This suggests that the word of mouth information from personal sources carry some weight in influencing the first-time visitors' decision of coming to visit to the site (Kotler et al, 1996).

Since the concept of marketing is to fulfil customers' needs in order to profit through customers' satisfaction (Kotler et al, 1996), it is clear that when a customer is not satisfied with the product, they are less likely to provide positive recommendations to their family and friends. The results show that the sampled visitors used little commercial or public sources to learn about the New Forest as a tourism destination, personal sources therefore becomes influential to affect them to decide whether to come to visit the site.

7.3 POPULAR TOURIST ACTIVITIES IN THE NEW FOREST

In spite of the fact that the secondary data did not provide credible visitor number data it does give some insight into a variety of aspects of tourism in the New Forest. According to this secondary data, the most common outdoor activity carried out by visitors to the New Forest is walking, cycling and having a picnic (Land Management Research Unit, 1996). During the survey carried out by the researcher in the calendar year of 1999, visitors were asked what activities they had undertaken and how much they enjoyed those activities on the day when they were interviewed. The results also show that walking was also the most participated activity by the sampled visitors, followed by cycling and driving around. These findings are relatively consistent with the secondary data.

Although the managing agencies attempted to reduce visitors' dependency on their motor vehicles, the lack of available public transportation means visitors need to rely on their private cars to go around the site. Often visitors arrive at the New Forest in their private cars (See earlier section of mode of transportation 7.2.3.4) and leave them in the numerous car parks whilst they carrying out outdoor activities. Moreover, the convenient and extensive road networks makes driving around the New Forest an enjoyable experience to many visitors. The scenery is of open heath land scattered with timber inclosures, and visitors are likely to encounter the famous New Forest ponies in their natural environment.

7.3.1 Visitors' Participation in Outdoor Activities and their Level of Enjoyment of the Activities

The visitor survey was carried at various locations, on different days of the week, and at different times of the day throughout 1999. Thus, some of the sampled visitors when they were interviewed had just arrived at the site, and some had already carried out various activities. Therefore, in the following discussion of visitors' participation in and their enjoyment of the listed outdoor activities, some visitors had undertaken more than one activity whilst some visitors could not reply to this set of questions.

In this set of the question, a five-point Likert scale was used to survey visitors' enjoyment of the activities they carried out, where 1 indicates the least enjoyment and progress to 5 to indicate very enjoyable experiences of the activities they participated in. The statistics shows that visitors had greatly enjoyable experiences in the outdoor activities they participated in. The table below provides a summarised statistics of the sampled visitors' participation in outdoor activities and their level of enjoyment (See Table 7.11).

Table 7. 11: The sampled visitors' participation in outdoor activities in the New Forest and their level of enjoyment of these activities.

Activities (no. of participants and % of the total samples)	Statistical information of level of enjoyment	
	Mean	Std. Deviation
Walking (726, 68.9%)	4.90	.29
Cycling (403, 38.3%)	4.90	.30
Picnicking (250, 23.7%)	4.96	.21
Horse riding (33, 3.1%)	4.91	.29
Driving around (324, 30.8%)	4.56	.65

7.3.2 Visitors' Level of Enjoyment of their Activities and their Overall Satisfaction of Visiting the New Forest

Looking into the visitors' level of overall satisfaction in respect of their visits to the New Forest, the results show that nearly two-third of the responded visitors had very high level of satisfaction, with a mean score of 4.62 and standard deviation of .58 (See Figure 7.8). 16% of the total surveyed visitors did not respond to the questions relating to their level of overall satisfaction, because they had not yet undertaken all their planned activities when they were interviewed. Nonetheless, as shown in the Figure 7.8, the responded visitors had high level of visit experiences, that more than 98% of them were satisfied or very satisfied with their visits to the New Forest.

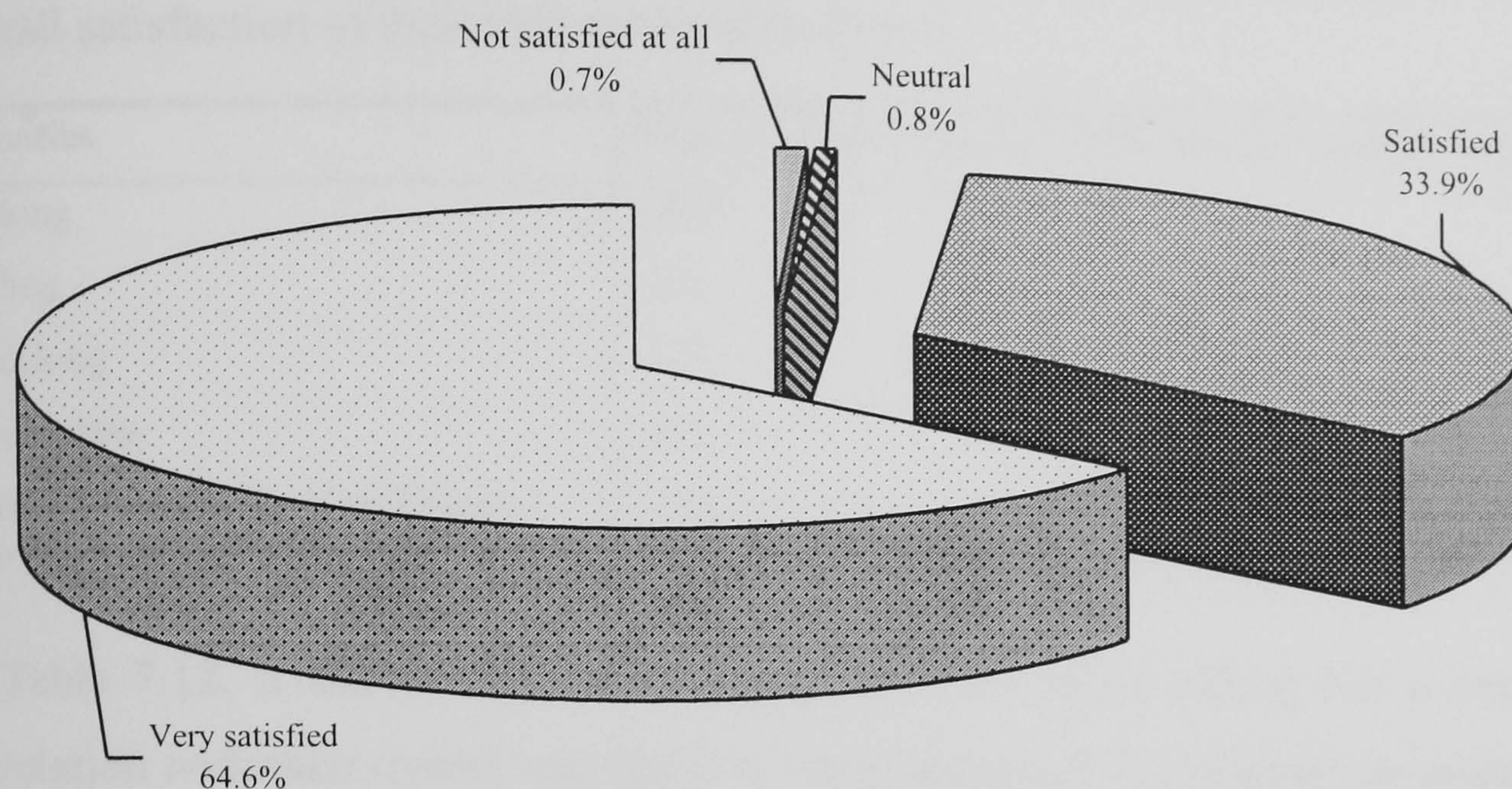


Figure 7. 8: Visitors' overall satisfaction of their visits to the New Forest (sample number 886 visitors).

Research findings show statistical significance in visitors' level of enjoyment of the activities they participated in and its contribution to their overall level of satisfaction (See Table 7.12). The results show positive correlations but they varied in strengths between visitors' level of enjoyment of their activities and their overall satisfaction of visiting the site, with high level of enjoyment of activities associated with high levels of overall satisfaction. Pearson correlation (r) ranges from -1 to 1. The value indicates the strength of the relationship between two variables, and the sign indicates whether the relationship is positively or negatively correlated (Pallant, 2001). Cohen (1988) suggests the following guidelines to interpret the strengths of the correlation:

- Small correlation: $r = .0$ to $.29$ or $r = -.1$ to $-.29$
- Medium correlation: $r = .3$ to $.49$ or $r = -.3$ to $-.49$
- Large correlation: $r = .5$ to 1 or $r = -.5$ to -1

Table 7. 12: Correlations of visitors' level of enjoyment of their activities and their overall satisfaction of their visit to the New Forest.

Activities	Pearson Correlation (r) with visitors' overall satisfaction
Walking	.284
Cycling	.326
Picnicking	.178
Horse riding	.851
Driving around in the New Forest	.138

In Table 7.12, it shows that visitors' enjoyment of horse riding has a very strong correlation with their overall satisfaction. Nevertheless, it is necessary to point out that the number of sampled visitors who undertook horse riding in the New Forest was small - only 33 of them, and they all had very high levels of enjoyment of such activity. Hence the correlation between horse riding and their overall satisfaction is high. Visitors' level of enjoyment of picnicking and driving around in the site only has small correlations with their overall satisfaction. This suggests such activities are perceived usual or normal and that visitors can undertake them in different places, for example, having a picnic in their neighbour's back garden, and whether or not participating in them in the New Forest has little effect on their overall satisfaction of visiting the site.

On the other hand, the environment of the New Forest enhances their enjoyment of riding a horse, cycling and walking. Also, when these activities are carried out in natural settings, it gives participants a feeling of "being blend in with the New Forest environment and became part of the surroundings". Hence, the correlations between horse riding, cycling and walking are stronger in strength.

7.3.3 Visitors' Perceptions of the Level of Environmentally Friendliness of their Outdoor Activities

The sampled visitors were asked to assess whether the activities they undertook were environmentally friendly towards the tourism resources of the New Forest. Again a

five-point Likert scale is used, ranging from 1 for very unfriendly to the New Forest environment to 5 for very friendly. The frequencies show that those visitors who responded considered the activities they had carried out, except for driving around, were environmentally friendly to the New Forest resources. Considering that driving has been labelled as one of the major causes of air pollution and a serious consumer of fossil fuel for several decades, it seems to have become a social pressure to an individual to admit that driving is “bad to the environment”. Although many of the people in Western society rely on private vehicles heavily, such perceived pressure makes people respond with a unified answer in the situation of a survey. In other words, it was expected that the sampled visitors would respond that driving around in the New Forest was not environmentally friendly to the New Forest resources. Table 7.13 provides the summarised information of the responded samples’ perceptions of how environmentally friendly their activities were.

Table 7. 13: The responded visitors’ perceptions of how environmentally friendly their outdoor activities were to the New Forest resources.

Activities (no. of participants and % of the total)	Statistical information of level of environmental friendliness	
	Mean	Std. Deviation
Walking (726, 68.9%)	4.79	.48
Cycling (403, 38.3%)	4.79	.45
Picnicking (250, 23.7%)	4.88	.38
Horse riding (33, 3.1%)	4.70	.68
Driving around (324, 30.8%)	1.94	.70

7.3.4 The New Forest as a “Family and Children Friendly Destination” to Undertake Outdoor Activities

In the marketing materials of the New Forest, often the featured pictures are of a family of four or more with their pet dog enjoying strolling, cycling, having a picnic and camping, set against the green backcloth of the forest together with roaming ponies. The results show that family members are the most common visitor group composition (See earlier section 7.2.3.3). Looking into the analysis of activities and participants’ group composition, the results show statistically significant differences

between the different groups of visitors. In all the listed outdoor activities, the majority of the participants came to the site with their family members. This finding echoes the images in the marketing materials in web pages, holiday brochures and other publications.

Situated in the densely populated South East of England, the New Forest provides a retreat for people who reside in the surrounding region, from their busy urban life. The historical importance of the site, and the still on-going commercial practice of commoning and timber production also meant that the site is full of educational opportunities to young generations. Promoting the site as a family friendly destination and encouraging visitors to participate in outdoor activities in the site is an ideal way to guide them towards a better understanding and appreciation of the environment of the New Forest. As Tilden (1977) suggests, through interpretation, visitors' understanding of the resources of a site is likely to be enhanced, and then visitors are more likely to appreciate and more willing to protect the resources. Therefore, resources are likely to be conserved and the long-term use of the area for tourism activities is likely to be sustained. More importantly, those young visitors are likely to learn to appreciate the unique landscape, wildlife and history of the site through their enjoyable visits to the New Forest. In turn, the educational information of resource protection may be rooted in their minds, providing the appropriate interpretation is made available.

7.4 VISITORS' PERCEPTIONS OF THE MANAGEMENT AND MAINTENANCE OF THE TOURISM-SUPPORTING FACILITIES IN THE NEW FOREST

Various tourism researchers have suggested that poorly managed and maintained tourism facilities signal the negligence of the site managing authorities and invite vandalism (Hendee et al, 1990). The phenomenon of "vandalism attracts more vandalism" is in fact often seen in public places. Public property attracts such depreciative behaviour due to the diffusion of the ownership of the property and the

resulting diffusion of sense of guilt from inappropriate behaviour because clear ownership cannot be identified (Ward, 1973; Wilson, 1979). For example, people are likely to litter on a street where is already full of rubbish, but they may look for a bin to place their refuse when the surrounding environment is immaculate. The dirtiness of an area or a place implies that filth is allowed, and that no one cares about it. Thus, in many tourism destinations, providing facilities such as car parks, bins, footpaths, cycle tracks, barbecue sites and toilets is essential. Without these facilities, the destination would be in chaos, visitors' experiences are likely to decline, and the site would soon lose its appeal to visitors.

The sampled visitors were asked to rank their perceptions of the management and maintenance of the physical conditions of the tourism support facilities in the New Forest. These facilities include car parks in the Crown Lands, their overnight stay accommodation, roads, footpaths and cycle tracks, signposts and bulletin boards, Tourist Information Centres and the mobile Information Van, and toilets. Five-point Likert scale was applied for ranking, where 1 indicates the worst and 5 means very good condition. Visitors felt the management and maintenance of the conditions of these facilities were good in general, although they thought the conditions of signposts and toilets were just above average (See Table 7.14).

Table 7. 14: Visitors' perceptions of the physical conditions of the tourism supporting facilities.

Facilities (no. of responded visitors)	Statistical information of the conditions of the facilities	
	Mean	Std. Deviation
Car parks in the Crown Lands (889)	4.13	.49
Accommodation (442)	4.40	.57
Roads in the New Forest (866)	3.96	.46
Footpaths, cycle tracks (739)	4.18	.51
Sign posts, bulletin boards, interpretive panels (768)	3.62	.83
TICs, mobile Information Van (805)	4.36	.54
Toilets in car parks (416)	3.6	.77

The most heard visitors' criticism of the signposts providing directorial information are:

- Road signs are not often seen;
- They are positioned in awkward locations, for instance, too close to the junction or crossroad, or too low to the ground, which makes them difficult to be seen;
- Contents have too small a font;
- Some road signs are vandalised.

In the case of bulletin boards and interpretive panels, because they are placed in large car parks (bulletin boards) and along the Tall Tree Walks and the Deer Sanctuary (interpretive panel), many of the visitors were not aware of their existence. A minority of the sampled visitors had seen the interpretive panels along the Tall Tree Walks or in the Deer Sanctuary in Bolderwood, and they highly acclaimed the interpretive information that they received during their walks. This indicates that the location of the bulletin boards should be more visible, and the interpretive panels could be used more widely.

During the conversation with the Education Officer of the Forestry Commission, she expressed the dilemma of placing interpretive panels within Crown Lands. The educational function of interpretation through signs and panels is recognised, however, they were concerned that the New Forest may take on an urbanised look and that the atmosphere may become spoiled by signage. The researcher suggested that it may be better to give out related interpretive information of a particular location in the form of leaflets in situ by allocating the leaflets in an information box close by the location, and visitors can self-service select and take their needed information. The Forestry Commission had displayed such leaflets at the beginning of walks and cycle tracks previously to provide interpretation, but soon they found that the leaflets were discarded along or at the end of the walks, which created a litter problem and was potentially dangerous to the wildlife if they fed on them. Since then the Forestry Commission no longer offers such interpretation along walks. Nonetheless, the

Education Officer stressed that they might consider introducing the interpretive panels in other designated walks in the Crown Lands to enhance visitors' understanding of the New Forest flora and fauna.

7.4.1 The Differences between First-time and Repeat Visitors' Perceptions of the Conditions of the Facilities

Because of their familiarity with the site, repeat visitors' may have lower expectation of the conditions of the tourism facilities in the New Forest, which in turn, would lead to their having a higher ranking of their perceived management and maintenance outcome of the facilities. On the other hand, first-time visitors might use their past experiences gained when visiting other destinations and compare those conditions to the tourism facilities in the New Forest. Hence, if the first-time visitors' previous visits to some other sites were highly enjoyable, their expectation prior to coming to the New Forest might be high. If their New Forest experiences fall short, their overall satisfaction and perceptions of the management and maintenance outcome of the tourism facilities may be lower. On the other hand, if their previous experiences at other tourism destinations were not satisfying, they might be surprised by the quality standard of the facilities provided by the New Forest managing authorities. In other words, first-time visitors' perceived conditions of the facilities and their overall satisfactions are relevant to their previous experiences.

The result shows statistically significant difference between first-time and repeat visitor's perceptions of the conditions of some of the tourism facilities. In general, the mean scores of these two groups of visitors' overall satisfaction of visiting the site and their perceptions of the conditions of the tourism facilities varies - first-time visitors' mean scores are lower than of those repeat visitors (See Table 7.15).

Table 7. 15: The statistical information of first-time and repeat visitors' overall satisfaction of visiting the New Forest and their perceived conditions of the tourism facilities and the natural scenery of the site (*Italic indicates no statistical significant differences between first-time and repeat visitors' perceptions*).

Overall satisfaction, natural scenery and facilities	First-time visitors		Repeat visitors	
	Statistical information		Statistical Information	
	Mean	Std. deviation	Mean	Std. deviation
<i>Overall satisfaction</i>	4.55	.63	4.64	.56
Natural scenery	4.86	.36	4.93	.26
Car parks in the Crown Lands	4.02	.50	4.18	.48
<i>Accommodation</i>	4.35	.58	4.43	.57
Roads in the New Forest	3.87	.48	3.98	.45
<i>Footpaths, cycle tracks</i>	4.18	.44	4.19	.52
Signs, bulletin boards, interpretive panels	3.42	.87	3.67	.82
<i>TICs, mobile Information Van</i>	4.33	.56	4.37	.54
<i>Toilets in car parks</i>	3.48	.76	3.63	.77

7.4.2 Visitors' Overall Satisfaction of Visiting the New Forest and their Perceptions of the Conditions of the Facilities

In the previous discussion, the results show that visitors' level of enjoyment of the activities they carried out was high. Such high level of visit experiences without doubt contributed positively, in part, to their high level of overall satisfaction of visiting the New Forest. Except for visit experiences, there are other elements influencing visitors' overall satisfaction, including the natural scenery of the New Forest, and their perceived physical conditions of the tourism facilities. Visitors' level of enjoyment of the natural scenery of the New Forest and the level of their perceived physical conditions of the tourism facilities are believed to have positive relationship with their overall satisfaction of visiting the site. That is, the better the conditions of the tourism facilities and the natural scenery of the New Forest, the higher level of their overall satisfaction.

Table 7.14 shows the mean and standard deviation of all the visitors' perceptions of the physical conditions of the tourism facilities, and it is clear that visitors' perceptions of the conditions of these facilities were either average or above. If statistically there is a significant relationship, regardless of whether it is positive or negative, between the perceived quality standard of the management and maintenance of these facilities and the visitors' overall satisfaction, then the conditions of particular facilities are one of the factors that enhance or lessen visitors' overall satisfaction levels. Correlations show a statistically significant relationship between some of the tourism facilities as well as the New Forest natural scenery and visitors' overall satisfaction of visiting the New Forest (See Table 7.16).

Table 7. 16: Correlations of visitors' perceived conditions of the natural scenery of the site and the tourism supporting facilities, and their overall satisfaction of their visit to the New Forest (*Italic indicates no significance in the correlation*).

Facilities and natural scenery	Pearson Correlation (r) with visitors' overall satisfaction
Car Park	.097
Accommodation	.265
<i>Roads in the New Forest</i>	<i>-.021</i>
Footpaths, cycle tracks	.247
<i>Sign posts, bulletin boards, interpretive panels</i>	<i>.043</i>
TICs, mobile Information Van	.116
Toilets	.150
Natural scenery of the site	.246

The results show that footpaths, cycle tracks and the natural scenery all have positive correlations with the visitors' overall satisfaction, although the correlation value is relatively small. For visitors who stayed overnight in the New Forest, irrespective of the types of accommodation, the management and maintenance of their accommodation also has positive correlation with their overall satisfaction. Referring to the correlations between the levels of visitors' enjoyment of their activities and their overall satisfaction, it is clear that recreational activities and the management and maintenance of their related facilities, such as footpaths, cycle tracks and accommodation, as well as the New Forest natural scenery, all have positive

contribution to the visitors' overall satisfaction. In other words, it is the activities visitors carried out and the "place" where they undertook the activities that enhance their overall satisfaction of visiting to the New Forest. Camping, walking, driving around and having a picnic are common recreational activities a visitor can undertake in various tourism destinations. But it is the background environment, the New Forest, interacts with visitors' activities, which makes up their experiences of the site.

Looking into the marketing materials of the New Forest available in the web sites and in printed forms, the New Forest itself is the focal point and the availability of the recreational activities and facilities are fitted into the New Forest. For example, in the Forestry Commission's Forest Holidays - Caravan and Camping guide (1998), the New Forest is "Historic Royal playground: it has been a place for recreation since it was chosen as a special hunting ground nearly a thousand years ago by William the Conqueror". In other words, the place - the New Forest, is the main attraction that arouses people's interests to visit the site, and the activities they could participate in and the facilities designated, managed and maintained to support the tourism industry in the site are just the elements that build up visitors' overall satisfaction. This also explains the relatively small Pearson correlation values in the research results. Visitors who came to the New Forest for recreational purposes were satisfied with their visit experiences, because they were undertaking recreational activities during their leisure time. They could leave their daily stress or burden behind and not to worry about it, but enjoy themselves and relax. Hence, they had high level of overall satisfaction, because they were relieved from their hectic or tense daily life. The activities they carried out and the standard of the facilities they used just contributed slightly more to their overall satisfaction.

7.4.2.1 First-time and repeat visitors' overall satisfaction of visiting the New Forest and their perceptions of the physical conditions of the facilities

In Table 7.16 the results show statistical significance relating the perceived conditions of some tourism facilities to the overall satisfaction of visiting the New Forest between

repeat and first-time visitors. Correlation results of the two groups of visitors between their overall satisfaction and their perceived quality standard of the facilities and the natural scenery differ slightly. The findings show some facilities, including car parks in the Crown Lands, Tourist Information Centres and the mobile Information Van, and the toilets in the car parks, the perceived standard of their conditions have positive, although small, correlations to the repeat visitors' overall satisfaction. However, the conditions of these particular facilities are not significant elements in enhancing first-time visitors' overall satisfaction levels. On the other hand, first-time visitors' perceived conditions of their accommodation has medium positive correlation with their overall satisfaction, but the correlation between repeat visitors' perceptions of the conditions of their accommodation and their overall satisfaction is just small, although still positive (See Table 7.17).

Table 7. 17: The comparison between first-time and repeat visitors' correlations between their overall satisfaction and the elements contributed to their visit experiences (*Italic indicates no significant correlation*).

Facilities and natural scenery	Pearson Correlations (r) with visitors' overall satisfaction	
	First-time visitors	Repeat visitors
Car parks in the Crown Lands	<i>-.032</i>	.129
Accommodation	.301	.243
Roads in the New Forest	<i>-.102</i>	<i>-.005</i>
Footpaths, cycle tracks	.269	.244
Signs, bulletin boards and interpretive panels	.142	.013
TICs, mobile Information Van	.089	.126
Toilets in the car parks	.131	.151
Natural scenery	.243	.242

This suggests that the factors that contributed to first-time and repeat visitors' overall levels of satisfaction differ slightly. Footpaths, cycle tracks, and the natural scenery are directly related to all visitors' experiences of outdoor recreational activities in the site, and they were all positively correlated with both first-time and repeat visitors' overall satisfaction. The staying first-time visitors' perceptions of their accommodations show slightly stronger positive correlation with their overall

satisfaction than of those repeat visitors, because it is their first visit to the site, the higher the perceived conditions the more enhanced the visit experiences. For repeat visitors, the standard of their perceived conditions of the Tourist Information Centres and the mobile Information Van has small but positive correlation with their overall satisfaction.

However, and somewhat surprisingly, the findings show no significant correlation between first-time visitors' overall satisfaction and their perceptions of the conditions of the Tourist Information Centres and the mobile Information Van. This might be because the first-time visitors were overwhelmed by the new environment they were exposed to, for example, looking for road signs and direction leading to the places they wanted to go to, the natural scenery and ponies along the way, or feeling fatigue after the journey to the site. In such situations, the look of the Tourist Information Centres may not have strong influences on the first-time visitors' overall satisfaction. Moreover, because it was their first visit to the site, they may focus more on the quality of other element, such as the natural scenery and accommodation, if they were staying visitors (feeling of value for money). Thus, the condition of the Tourist Information Centres was not the main component that enhanced or lessened their experiences of visiting the New Forest.

On the other hand, first-time visitors' perceptions of the quality of signage shows higher correlation with their overall satisfaction level, as opposed to very low, although positive, correlation of repeat visitors' perceptions and their overall satisfaction. This demonstrates that directorial and interpretive signs are relied upon by visitors, and for those first-time visitors who are not familiar with the site, the quality of signage contributes more to their overall satisfaction than it does to the repeat visitors. In other words, the physical conditions of the signage and the accuracy and quality of its information contents require regular maintenance and updating because they help visitors to carry out their activities safely and satisfyingly. Moreover, signage provides instant information to visitors, that is, when visitors see a sign, they instantly receive the information that is related to what they see or where

they are and it is not necessary for them to refer to their guide books or site maps. Hence, high standard signage has considerable contribution to visitors' enjoyable and safe visits to a destination.

7.5 VISITORS' AWARENESS OF THE EXISTENCES OF THE VISITOR CODES

The visitor codes in the New Forest serve as a function of resource and visitor management. For instance, the codes of speed limit, car park thieves, campfire and animal feeding, are directly linked to the protection and management of the New Forest wildlife and landscape, as well as visitor safety and comfort. Other codes, including litter, parking and the uses of designated footpaths and cycle tracks, are resource protection and management orientated. These codes are commonly seen in many tourism destinations worldwide. They are intended to encourage visitors to engage in activities and behaviour that are more environmentally friendly. Visitor codes usually are not law-enforced, although visitors are advised to observe and comply with these codes. Currently there are nine visitor codes in the New Forest:

- Road: speed limit of 40 mph on unfenced roads in the New Forest
- Access: walking on designated footpath or tracks to reduce disturbance to wildlife
- Parking: parking in designated car parks instead of parking on roadside to reduce traffic congestion
- Cycling: cycling on designated cycle tracks, to give way to walkers and horse riders, and to control cycling speed
- Dogs: pets should be under control and dogs should be on lead to reduce disturbance on wild animals and cattle
- Fire: no picnic or campfire. There are 2 barbecue sites provided by the Forestry Commission and can be booked in advance
- Litter: litter should be placed in bins provided or taken home
- Car park thieves: cars parked in car parks should be locked at all times to prevent breaking in by thieves

- Do not feed/approach animals: animal feeding is prohibited, and approaching wildlife may be dangerous

The figure below shows the frequencies of the total visitors' awareness of the existence of each of these codes (See Figure 7.9).

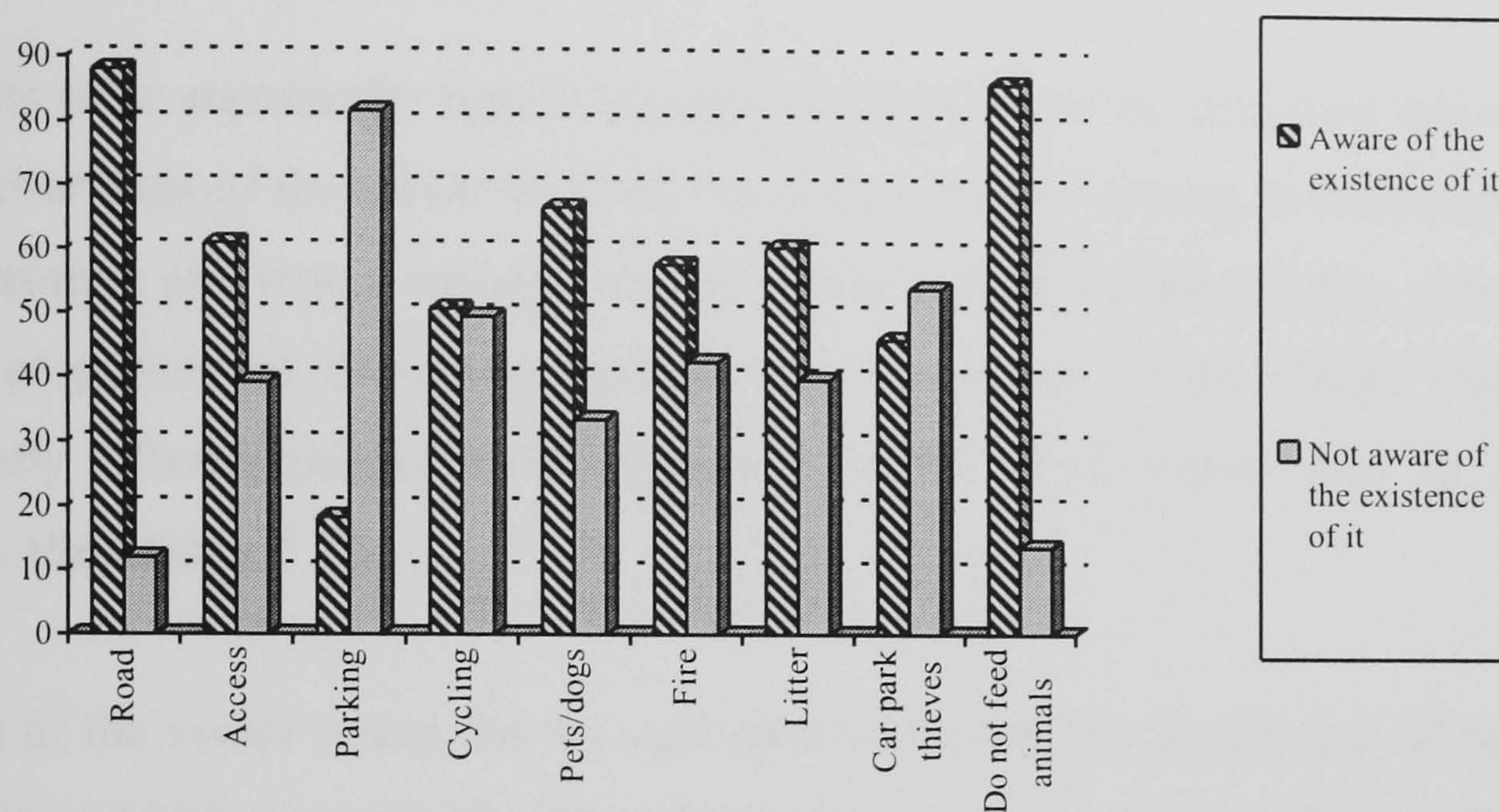


Figure 7. 9: The percentage of total sampled visitors' awareness of the visitor codes.

7.5.1 The Comparison between First-time and Repeat Visitors' Awareness of the Existences of the Visitor Codes

Among the 1,053 total visitors, 744 of them were repeat visitors (70.7% of the total). Almost one-third of the repeat visitors claim to visit the New Forest at least six times in a year. The familiarity with the site may lead to an "auto-pilot" style of visit and neglect the management-related and interpretive signs. The visitor codes, also known as the "key messages" that are developed by the New Forest District Council, are displayed in walks, car parks, bulletin boards, posted as signs and painted on the road surface (the 40 mph speed limit on unfenced roads in the New Forest). In other words, these codes that serve the management-related functions are in place, however, they may be unnoticed by the visitors who visit the locations frequently. On the other hand, in the case of first-time visitors, their unfamiliarity with the area may be likely to be a

disadvantage for them to be receptive or responsive to these management-related messages. Because it was their first visit to the New Forest, they may be overwhelmed by their experiences. In turn, they may not notice the visitor codes presented in signs, bulletin boards or site maps. Or, these visitor codes did not register in their mind because the information failed to arouse visitors' cognition process when they are exposed to a new environment.

The results show statistically significant differences between the first-time and repeat visitors' awareness of the existence of all the visitor codes. Looking at the percentage of the first-time and repeat visitors who are aware of each of these codes, it is clear that the proportion of the repeat visitors who are aware of the visitor codes is significantly different (higher) to the proportion of first-time visitors who are aware the codes (See Table 7.18).

Only two of the visitor codes, the 40 mph speed limit and the prohibition of feeding animals, scored high in terms of visitor awareness. However, the percentage of repeat visitors' unawareness of the remaining visitor codes was in fact high, considering that one-third of them visit the site at least 6 times a year.

Speed limit and animal feeding are the two codes that are most commonly seen. The speed limit is painted on the surface of the unfenced roads in the New Forest, and signs of 40 mph are placed at the beginning of these unfenced roads. Signs of "do not feed animals" are also posted throughout the New Forest. The rest of the visitor codes are only seen in the relevant locations, such as on gates of walks, on posts along cycle routes, and in car parks. They are also placed in bulletin boards, and are included in site maps, guide books and site-related literature that can be purchased in the Tourist Information Centres.

Table 7. 18: The percentage of first-time and repeat visitors' awareness of the visitor codes.

Code	Awareness of the existence of the visitor codes - breakdown into two visitor categories (No. of visitors)		Total no. of visitors who were aware of the visitor codes
Road: 40 mph speed limit	• Aware of it	First-time visitor - 69.3% (214) Repeat visitor - 95.8% (713)	927 (88%)
	• Not aware of it	First-time visitor - 30.7% (95) Repeat visitor - 4.2% (31)	
Access: walking on footpaths	• Aware of it	First-time visitor - 34.3% (106) Repeat visitor - 71.9% (535)	641 (60.9%)
	• Not aware of it	First-time visitor - 65.7% (203) Repeat visitor - 28.1% (209)	
Parking: parking in car parks	• Aware of it	First-time visitor - 7.1% (22) Repeat visitor - 23% (171)	193 (18.3%)
	• Not aware of it	First-time visitor - 92.9% (287) Repeat visitor - 77% (573)	
Cycling: cycling on cycle tracks	• Aware of it	First-time visitor - 27.5% (85) Repeat visitor - 60.2% (448)	533 (50.6%)
	• Not aware of it	First-time visitor - 72.5% (224) Repeat visitor - 39.8% (296)	
Pets/dogs: Pets should be under control and dogs should be on lead	• Aware of it	First-time visitor - 40.8% (126) Repeat visitor - 77.3% (575)	701 (66.6%)
	• Not aware of it	First-time visitor - 59.2% (183) Repeat visitor - 22.7% (169)	
Fire: no picnic fire or campfire	• Aware of it	First-time visitor - 29.4% (91) Repeat visitor - 69.4% (516)	607 (57.6%)
	• Not aware of it	First-time visitor - 70.6% (218) Repeat visitor - 30.6% (228)	
Litter: litter should be placed in bins provided or taken home	• Aware of it	First-time visitor - 34% (105) Repeat visitor - 71.4% (531)	636 (60.4%)
	• Not aware of it	First-time visitor - 66% (204) Repeat visitor - 28.6% (213)	
Car park thieves: lock your car and take your valuables	• Aware of it	First-time visitor - 23% (71) Repeat visitor - 55.5% (413)	484 (46%)
	• Not aware of it	First-time visitor - 77% (238) Repeat visitor - 44.5% (331)	
Do not feed/approach animals	• Aware of it	First-time visitor - 64.7% (200) Repeat visitor - 95.3% (709)	909 (86.3%)
	• Not aware of it	First-time visitor - 35.3% (109) Repeat visitor - 4.7% (35)	
Number of first-time visitors - 309			
Number of repeat visitors - 744			
Total sampled visitors - 1,053			

The results indicate that a large percentage of the repeat visitors actually have not seen some of these codes presented in any form during their visits to the site. It seems that these less-seen/less-known visitor codes need to be presented in a more noticeable, more visible form, not just being disguised or hidden in printed materials, on bulletin boards or gates.

7.5.1.1 The differences between repeat visitors' frequencies of visiting the New Forest and their awareness of the existences of the visitor codes

Chi-square tests were used among the 744 repeat visitors to examine whether the visitors who claimed to visit the New Forest more often are more aware of the existence of the visitor codes than those who visit the site less frequently. The results indicate statistically significant differences between these repeat visitors' frequencies of visits to the site and their awareness of the existence of the visitor codes. The findings show that those visitors who visit the New Forest more often consequently have more knowledge of the existence of the visitor codes. Once more, the "40 mph speed limit" and "animal feeding is prohibited" are the most seen/known visitor codes by not only frequent visitors but also those who visit the New Forest less than once in a year.

The code "parking in designated car parks and do not park on the roadside" was only known by less than a quarter of the repeat visitors. This code should be made more visible, more noticeable to visitors. Although it would be unlikely for the managing organisations to distribute or delivery these management-related visitor codes to all the visitors, it is worthwhile to consider other forms of presenting and delivering these codes to reach to as many visitors as possible in order to maximise the effectiveness of these codes (See Table 7.19).

Table 7. 19: The percentage of repeat visitors' awareness of the visitor codes in accordance of their frequencies of visit the New Forest.

Visitor Codes	Awareness of the existence of the visitor codes (no. and % of the repeat visitors) *	% and no. of repeat visitors' frequencies of visit the New Forest in a year and their awareness of the existence of the visitor codes †
Road: 40 mph speed limit	<ul style="list-style-type: none"> Aware of it (713, 95.8%) Not aware of it (31, 4.2%) 	<ul style="list-style-type: none"> More than 10 times - 100%, (169) 6-10 times - 100% , (69) 3-5 times - 100%, (99) 1-2 times - 92.2%, (188) Less than one visit - 92.6%, (188) More than 10 times - 0%, (0) 6-10 times 0%, (0) 3-5 times - 0%, (0) 1-2 times - 7.8%, (16) Less than one visit - 7.4%, (15)
Access: walking on footpaths	<ul style="list-style-type: none"> Aware of it (535, 71.9%) Not aware of it (209, 28.1%) 	<ul style="list-style-type: none"> More than 10 times - 83.4%, (141) 6-10 times - 82.6%, (57) 3-5 times - 72.7%, (72) 1-2 times - 69.1%, (141) Less than one visit - 61.1%, (124) More than 10 times - 16.6%, (28) 6-10 times - 17.4%, (12) 3-5 times - 27.3%, (27) 1-2 times - 30.9%, (63) Less than one visit - 38.9%, (79)
Parking: parking in car parks	<ul style="list-style-type: none"> Aware of it (171, 23%) Not aware of it (573, 77%) 	<ul style="list-style-type: none"> More than 10 times - 26% , (44) 6-10 times - 15.9% , (11) 3-5 times - 33.3%, (33) 1-2 times - 23%, (47) Less than one visit - 17.7%, (36) More than 10 times - 74%, (125) 6-10 times - 84.1%, (58) 3-5 times - 66.7%, (66) 1-2 times - 77%, (157) Less than one visit - 82.3%, (167)
Cycling: cycling on cycle tracks	<ul style="list-style-type: none"> Aware of it (448, 60.2%) Not aware of it (296, 39.8%) 	<ul style="list-style-type: none"> More than 10 times - 69.8%, (118) 6-10 times - 62.3%, (43) 3-5 times - 74.7%, (74) 1-2 times - 55.9%, (114) Less than one visit - 48.8%, (99) More than 10 times - 30.2%, (51) 6-10 times - 37.7%, (26) 3-5 times - 25.3%, (25) 1-2 times - 44.1%, (90) Less than one visit - 51.2%, (104)

Pets/dogs: Pets should be under control and dogs should be on lead	<ul style="list-style-type: none"> • Aware of it (575, 77.3%) <ul style="list-style-type: none"> More than 10 times - 83.4%, (141) 6-10 times - 87%, (60) 3-5 times - 80.8%, (80) 1-2 times - 77.5%, (158) Less than one visit - 67%, (136) • Not aware of it (169, 22.7%) <ul style="list-style-type: none"> More than 10 times - 16.6%, (28) 6-10 times - 13%, (9) 3-5 times - 19.2%, (19) 1-2 times - 22.5%, (46) Less than one visit - 33%, (67)
Fire: no picnic fire or campfire	<ul style="list-style-type: none"> • Aware of it (516, 69.4%) <ul style="list-style-type: none"> More than 10 times - 84%, (142) 6-10 times - 72.5%, (50) 3-5 times - 73.7%, (73) 1-2 times - 66.7%, (136) Less than one visit - 56.7%, (115) • Not aware of it (228, 30.6%) <ul style="list-style-type: none"> More than 10 times - 16%, (27) 6-10 times - 27.5%, (19) 3-5 times - 26.3%, (26) 1-2 times - 33.3%, (68) Less than one visit - 43.3%, (88)
Litter: litter should be placed in bins provided or taken home	<ul style="list-style-type: none"> • Aware of it (531, 71.4%) <ul style="list-style-type: none"> More than 10 times - 78.7%, (133) 6-10 times - 78.3%, (54) 3-5 times - 78.8%, (78) 1-2 times - 72.1%, (147) Less than one visit - 58.6%, (119) • Not aware of it (213, 28.6%) <ul style="list-style-type: none"> More than 10 times - 21.3%, (36) 6-10 times - 21.7%, (15) 3-5 times - 21.2%, (21) 1-2 times - 27.9%, (57) Less than one visit - 41.4%, (84)
Car park thieves: lock you car and take your valuables	<ul style="list-style-type: none"> • Aware of it (413, 55.5%) <ul style="list-style-type: none"> More than 10 times - 64.5%, (109) 6-10 times - 52.2 %, (36) 3-5 times - 62.6%, (62) 1-2 times - 51%, (104) Less than one visit - 50.2%, (102) • Not aware of it (331, 44.5%) <ul style="list-style-type: none"> More than 10 times - 35.5%, (60) 6-10 times - 47.8%, (33) 3-5 times - 37.4%, (37) 1-2 times - 49%, (100) Less than one visit - 19.8%, (101)
Do not feed/approach animals	<ul style="list-style-type: none"> • Aware of it (709, 95.3%) <ul style="list-style-type: none"> More than 10 times - 100%, (169) 6-10 times - 97.1%, (67) 3-5 times - 100%, (99) 1-2 times - 92.2%, (188) Less than one visit - 91.6%, (186) • Not aware of it (35, 4.7%) <ul style="list-style-type: none"> More than 10 times - 0%, (0) 6-10 times - 2.9%, (2) 3-5 times - 0%, (0) 1-2 times - 7.8%, (16) Less than one visit - 8.4%, (17)

* Number of repeat visitors - 744

† Number of repeat visitors in each sub-group of frequency of visit the New Forest:

- More than 10 times in a year - 169
 - 6-10 times in a year - 69
 - 3-5 times in a year - 99
 - 1-2 times in a year - 204
 - Less than one visit in a year - 203
-

7.5.1.2 New Forest District residents' awareness of the existences of the visitor codes

Among the sampled visitors, 63 of them (6%) reside in the New Forest District. The New Forest local residents use the site for recreational purposes, such as walking and cycling on a regular basis. In other words, they should be much more familiar with the New Forest than others. Dividing the total sampled visitors into New Forest District locals and non-locals to test their awareness of the existences of the visitor codes, the results show statistically significant differences between the locals and non-locals' awareness of the existence of the visitor codes. Local residents' knowledge of the existence of these visitor codes is higher than those who reside outside of the New Forest District. This finding supports the previous discussion that the familiarity with the site contributes positively to the awareness of the existence of the visitor codes. However, it is necessary to point out that more than half of the sampled locals are not aware of the "parking in car parks instead of parking on the roadside" code. This indicates the need for further consideration of how to effectively deliver this particular code (See Table 7.20).

Table 7. 20: The percentage of local and non-local visitors' awareness of the existence of the visitor codes (local residents - 63; non-local visitors - 990; total sample 1,053).

Code	Awareness of the existence of the visitor codes - breakdown into two visitor categories (No. of visitors)		Total no. of visitors who were aware of the visitor codes (% of the total visitors)
Road: 40 mph speed limit	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 98.4% (62) Non-local visitor - 87.4% (865) Local visitor - 1.6% (1) Non-local visitor - 12.6% (125)	927 (88%)
Access: walking on footpaths	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 84.1% (53) Non-local visitor - 59.4% (588) Local visitor - 15.9% (10) Non-local visitor - 40.6% (402)	641 (60.9%)
Parking: parking in car parks	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 44.4% (28) Non-local visitor - 16.7% (165) Local visitor - 55.6% (35) Non-local visitor - 83.3% (825)	193 (18.3%)
Cycling: cycling on cycle tracks	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 73% (46) Non-local visitor - 49.2% (487) Local visitor - 27% (17) Non-local visitor - 50.8% (503)	533 (50.6%)
Pets/dogs: Pets should be under control and dogs should be on lead	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 88.9% (56) Non-local visitor - 65.2% (645) Local visitor - 11.1% (7) Non-local visitor - 34.8% (345)	701 (66.6%)
Fire: no picnic fire or campfire	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 90.5% (57) Non-local visitor - 55.6% (550) Local visitor - 9.5% (6) Non-local visitor - 44.4% (440)	607 (57.6%)
Litter: litter should be placed in bins provided or taken home	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 85.7% (54) Non-local visitor - 58.8% (582) Local visitor - 14.3% (9) Non-local visitor - 41.2% (408)	636 (60.4%)
Car park thieves: lock your car and take your valuables	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 71.4% (45) Non-local visitor - 44.3% (439) Local visitor - 28.6% (18) Non-local visitor - 55.7% (551)	484 (46%)
Do not feed/approach animals	<ul style="list-style-type: none"> • Aware of it • Not aware of it 	Local visitor - 98.4% (62) Non-local visitor - 85.6% (847) Local visitor - 1.6% (1) Non-local visitor - 14.4% (143)	909 (86.3%)

One “local” visitor was not aware of any of the visitor codes. She was from South Africa and had just arrived in the UK for a short period of time. She was working for a local family. When she was selected to participate in the visitor survey, she had just had her first Sunday-off and it was her “first visit” to the New Forest when she actually had the opportunity to “see and experience” the area. Hence it explains the results that although, by definition, she was a local visitor, she was not aware of even the most often seen visitor codes.

7.5.1.3 The differences between first-time and infrequent repeat visitors’ awareness of the existences of the visitor code

The findings discussed so far all indicate that visitors' awareness of the visitor codes is linked to their familiarity with the site - that the more familiar with the New Forest they are, the more aware of the visitor codes they show. Hence, it is interesting to look into the first-time visitors and those repeat visitors who come to visit the New Forest less than once a year to explore whether they show significant differences in their awareness of the visitor codes. There were 309 first-time visitors, and 203 repeat visitors who come to the New Forest less than once a year.

The results show statistically significant differences in the proportion of repeat visitors that come to the site less than once a year who were aware of the existence of the visitor codes to the proportion of the first-time visitors who were aware of the codes (See Table 7.21).

Table 7. 21: The percentage of first-time visitors and the visitors who rarely visit the site their awareness of the existence of the visitor codes.

Code	Awareness of the existence of the visitor codes - first-time visitors and infrequent visitors who visit the New Forest less than once in a year (No. of visitors)		Total no. of visitors who were aware of the visitor codes (% of the total visitors)
Road: 40 mph speed limit	• Aware of it	First-time visitor - 69.3% (214) Infrequent visitors - 92.6% (188)	927 (88%)
	• Not aware of it	First-time visitor - 30.7% (95) Infrequent visitors - 4.2% (31)	
Access: walking on footpaths	• Aware of it	First-time visitor - 34.3% (106) Infrequent visitors - 61.1% (124)	641 (60.9%)
	• Not aware of it	First-time visitor - 65.7% (203) Infrequent visitors - 38.9% (79)	
Parking: parking in car parks	• Aware of it	First-time visitor - 7.1% (22) Infrequent visitor - 17.7% (36)	193 (18.3%)
	• Not aware of it	First-time visitor - 92.9% (287) Infrequent visitor - 82.3% (167)	
Cycling: cycling on cycle tracks	• Aware of it	First-time visitor - 27.5% (85) Infrequent visitor - 48.8% (99)	533 (50.6%)
	• Not aware of it	First-time visitor - 72.5% (224) Infrequent visitor - 51.2% (104)	
Pets/dogs: Pets should be under control and dogs should be on lead	• Aware of it	First-time visitor - 40.8% (126) Infrequent visitor - 67% (136)	701 (66.6%)
	• Not aware of it	First-time visitor - 59.2% (183) Infrequent visitor - 33% (67)	
Fire: no picnic fire or campfire	• Aware of it	First-time visitor - 29.4% (91) Infrequent visitor - 56.7% (115)	607 (57.6%)
	• Not aware of it	First-time visitor - 70.6% (218) Infrequent visitor - 43.3% (88)	
Litter: litter should be placed in bins provided or taken home	• Aware of it	First-time visitor - 34% (105) Infrequent visitor - 58.6% (119)	636 (60.4%)
	• Not aware of it	First-time visitor - 66% (204) Infrequent visitor - 41.4% (84)	
Car park thieves: lock your car and take your valuables	• Aware of it	First-time visitor - 23% (71) Infrequent visitor - 50.2% (102)	484 (46%)
	• Not aware of it	First-time visitor - 77% (238) Infrequent visitor - 49.8% (101)	
Do not feed/approach animals	• Aware of it	First-time visitor - 64.7% (200) Infrequent visitor - 91.6% (186)	909 (86.3%)
	• Not aware of it	First-time visitor - 35.3% (109) Infrequent visitor - 8.4% (17)	
Number of first-time visitors - 309			
Number of repeat visitors - 744			
Number of infrequent repeat visitors - 203			

According to the above findings, it is clear that visitors' familiarity with the New Forest affects their awareness of the existence of the visitor codes. Even those repeat visitors who rarely come to the site still have more knowledge of the visitor codes than the first-time visitors.

Referring to the theories of communication (Burgoon et al, 1994), communication is an on-going process and wanting to identify the beginning and the end of a communication process is difficult. Moreover, communication is highly selective process. One cannot pay attention to information to which they are not exposed; the information cannot be perceived and interpreted if it is not attended to; and this individual cannot retain such information if it is not perceived. People choose to expose themselves to communication that reaffirms their pre-existing attitudes in order to strengthen their images of themselves and what they "know". On the other hand, people are likely to avoid messages that challenge or are against their preconceptions.

At a given time, people select the information to which they can give active attention. The selectively received information is usually held for a short period of time in "short-term sensory storage" from which we draw, according to our ability, to process sensory input (Egeth, 1967). This echoes Piaget's theory of assimilation and accommodation process of cognitive development (See Chapter Three). An individual's capability to store a message, draw it out from the storage and to attend to it is influenced by several factors, including their intellectual level, psychological needs and other situational factors. For example, a first-time visitor to the New Forest who is unfamiliar with the direction is less likely to pay active attention to the visitor codes. Because they may be overwhelmed by the amount of information they encounter, or they may be tired from the journey and want to look for facilities such as toilet or café to rest, the visitor codes might not seem to be important or relevant and therefore, they are less likely to select such information to pay much attention to it. On the other hand, familiarity with certain information may make people inattentive to the information (Burgoon et al, 1994), and this explains why not all the repeat visitors were aware of the existence of the visitor codes in the New Forest.

One of the functions of communication is categorised as being instrumental function. That is, people obtain control over their environment through communication (Burgoon et al, 1994). Moreover, communication is a constant process. In other words, visitor codes can be seen as the instrument that is designed by the site-managing authorities to control visitors' activities. The expected function of the visitor codes is to encourage visitors to modify their inappropriate behaviour, and the codes are presented in different media to deliver these messages to visitors. Therefore, visitors' unawareness of the existence of the visitor codes indicates the termination of the communication process - the visitors did not receive the information. In other words, visitors' unawareness means the failure of the "informing" function of communication applied in the context of visitor management (Sharpe, 1982b).

Before assessing the outcome of the visitor codes, it is necessary to examine the delivery of these codes. There are few feedback channels for the visitors to respond to the managing agencies regarding these visitor codes, which is a disadvantage for communicating messages relating to the visitor codes. Moreover, the presentation and the contents of the current visitor codes are not very entertaining, nor very persuasive. In addition, these visitor codes seem more "regulation" oriented with the undertone of "Don't" in the codes, but with little or no further information of why visitors should observe these codes and how the resources would benefit from the application of these codes. In other words, such codes may lack the ability to persuade visitors to observe and practise these codes. When the main purpose of communication is to modify or strengthen beliefs, attitudes, and behaviour, entertaining and persuasive communication messages stand a better chance to successfully fulfil the purposes (Burgoon et al, 1994; Johnston, 1994). In turn, the purpose of encouraging visitors to modify inappropriate behaviour is more likely to be achieved (Alt and Shaw, 1984; Ham, 1992; Sharpe, 1982a; Tilden, 1977).

It is necessary to improve the delivery of some of the visitor codes. The codes of 40 mph speed limit and do not feed animals are the two codes that most frequently appeared in different media, and the research findings show they were the most known

codes to the sampled visitors. This suggests that the frequency of appearance of other codes needs to be increased in order to be effective. Referring to the characteristics of communication, communication requires a message sender and receiver - when the receiver does not receive information this might be because the sender and the receiver are not in the same setting to enable the communication process to occur. Thus, by increasing the opportunities to allow the message sender and receiver to encounter, visitors' awareness of the existence of the visitor codes is likely to be raised.

Referring to the theory of cognitive learning, visitors' unawareness of the visitor codes suggests the possibility that visitors do not process the information in the visitor codes cognitively. The information in the visitor codes is not difficult to understand, and they are in fact common sense and common practice that are known and carried out by the majority of the people in their daily life. For instance, the speed limit is noticed by many drivers and the alteration of driving speed, that is, behavioural modification, is usually practised when the speed limit sign or camera is sensed. Locking cars up, no littering, no lighting fire, walking on pedestrian, cycling on cycle lane where applicable, all these codes actually exist in one's everyday environment. The explanation for the unawareness of these codes in the environment of the New Forest and consequently visitors' inappropriate activities and behaviour might be that visitors do not respond to the codes cognitively. Piaget (in Hergenhahn, 1982) suggests in his proposed process of cognitive learning theory that the environment has an influence on an individual's cognitive structure. Thus, when visitors are overwhelmed by the New Forest landscape or wildlife, the New Forest environment outweighs the information in the visitor codes, visitors are likely to selectively chose the information they would like to receive. In turn, they may or may not have seen the codes, but the information does not register in their cognitive structures.

Furthermore, such situations can also be explained by the visitors' seemingly mindless mental state. Visitors are busy experiencing and enjoying the New Forest; their mental state may be active and mindful to respond to the New Forest's resources. Nevertheless, visitors may perceive the visitor codes as regulations and alter to a

mindless state when they encounter them. Information received by an individual mindlessly is less likely to stay in their mind for a long period of time (Moscardo, 1999). Mayo and Jarvis (1981) also point out that when visitors travel away from home, they are likely to feel that they are freed from behavioural and attitudinal restrictions that existed in their home environment. Hence, visitors become less responsive to the existence of these visitor codes because they feel less constrained in their behaviour.

These visitor codes are not law-enforced, thus, it is possible that visitors neglect the codes they see or hear because there is no “punishment” associated with their not complying with these codes. Referring to Skinner’s theory of operant conditioning, the outcome of a particular behaviour has effects on the recurrence of that behaviour (Hergenhahn, 1982, Skinner, 1953). That is, if the outcome of the behaviour is what that individual wants, the behaviour is likely to recur, and vice versa. Because these visitor codes are not enforced by law, it leaves the managing agencies little authority to deal with the situations when visitors do not observe and practise them. In other words, because the visitor codes lack the power of punishment, whether or not visitors observe and practise these codes they do not receive reinforcement or punishment. In such a situation, it is possible for visitors to be less aware of these codes.

7.5.2 The Comparison between Excursionists’ and Staying Visitors’ Awareness of the Existences of the Visitor Codes

The exploration of visitor types and their awareness of the existence of the visitor codes reveals statistically significant differences in only two codes - access and litter (See Table 7.22).

Table 7. 22: The percentage of excursionists and staying visitors' awareness of the visitor codes (*the italic codes indicates there are no statistically significant differences in visitor types and their awareness of the existence of the codes*).

Code	Awareness of the existence of the visitor codes - breakdown into two visitor types (No. of visitors)		Total no. of visitors who were aware of the visitor codes
<i>Road: 40 mph speed limit</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 88.8% (525) Staying visitors - 87% (402)	927 (88%)
<i>Access: walking on footpaths</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 58% (343) Staying visitors - 64.5% (298)	641 (60.9%)
<i>Parking: parking in car parks</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 17.4% (103) Staying visitors - 19.5% (90)	193 (18.3%)
<i>Cycling: cycling on cycle tracks</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 50.6% (299) Staying visitors - 50.6% (234)	533 (50.6%)
<i>Pets/dogs: Pets should be under control and dogs should be on lead</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 68.9% (407) Staying visitors - 63.6% (294)	701 (66.6%)
<i>Fire: no picnic fire or campfire</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 58.5% (346) Staying visitors - 56.5% (261)	607 (57.6%)
<i>Litter: litter should be placed in bins provided or taken home</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 56.9% (336) Staying visitors - 64.9% (300)	636 (60.4%)
<i>Car park thieves: lock you car and take your valuables</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 46.9% (277) Staying visitors - 44.8% (207)	484 (46%)
<i>Do not feed/approach animals</i>	<ul style="list-style-type: none"> Aware of it Not aware of it 	Excursionists - 87.6% (518) Staying visitors - 84.6% (391)	909 (86.3%)

Number of excursionists – 591
 Number of staying visitors – 462
 Total sampled visitors - 1,053

7.6 VISITORS' AWARENESS OF THE TOURIST INFORMATION CENTRES BEFORE THEIR ARRIVAL AT THE NEW FOREST AND THEIR PURPOSES OF GOING TO THE TOURIST INFORMATION CENTRES

The New Forest District Council funds and manages three of the four Tourist Information Centres – Lyndhurst, Ringwood and Lymington. Fordingbridge Tourist Information Centre is funded by businessmen and managed by the South Tourist Board. Except for Lyndhurst, all Tourist Information Centres operate on a seasonal basis – between Easter and September. The table below provides the number of visitors these Tourist Information Centres serve every year (See Table 7.23).

Table 7. 23: The location and number of annual visitors served at each of the Tourist Information Centre.

Location	Operation season	Annual visitor number	Funding and managing agency
Lyndhurst	Open all year	350,000	NFDC funded and manages
Ringwood	Easter - September	70,000	NFDC funded and manages
Lymington	Easter - September	70,000	NFDC funded and manages
Fordingbridge	Easter - September	30,000	Parish/Commercial funded, STB manages

Source: New Forest District Council, 1998.

The Forestry Commission operates a mobile Information Booth in the car park of Bolderwood. During the year when the survey was carried out, the mobile Information Booth was open to serve visitors during weekends in summer months. According to the fact sheet collected from the Forestry Commission, the number of visitors the mobile Information Booth served accounted for just over 11,000 in the summer of 2001 (Forestry Commission, 2002).

Based on the figures provided by the managing agencies of the Tourist Information Centres and the mobile Information Booth, the number of visitors they serve in a year is approximately 531,000.

Tourist Information Centres are common features in tourism destinations worldwide. The biggest advantage of Tourist Information Centres is that they are staffed for the purposes of responding to visitors' queries personally and promptly. Such personal and attended services are considered by researchers ideal interpretive media because of their warmth and flexibility (Sharpe, 1982). Staff in the Tourist Information Centres not only make visitors feel welcome and allow them to develop two-way communication, but also deals with situations beyond the scope of interpretation, such as first aid and policing. Therefore, Tourist Information Centres are often the focal point in tourism destinations where directorial and interpretive materials and activities are displayed and commenced.

The main function of the Tourist Information Centres and the mobile Information Booth in the New Forest is to provide directorial and interpretive information in the form of leaflets, guide books and site maps to visitors. The staff in the Tourist Information Centres also help visitors to book overnight accommodation in the New Forest, and advise them about the attractions to visit and activities available. The mobile Information Booth provided by the Forestry Commission is staffed by their seasonal ranger, whose role includes selling and providing directorial as well as interpretive information and materials to visitors, and responding to visitors queries. Bolderwood, where the mobile Information Booth is located, is popular among visitors for its Deer Sanctuary, which is a deer-viewing platform. There are interpretive panels about the deer species in the platform, and often visitors are excited by the sight of the animal. There are deer species in display in the mobile Information Booth, and the seasonal ranger is able to respond to visitors' queries about the wildlife and the landscape of the New Forest. In other words, the seasonal ranger not only sells directorial information to visitors, but also play a more active role in providing interpretive information upon request.

Among the sampled visitors, 76.4% of them (805) have been to the Tourist Information Centres or the mobile Information Booth before - a much higher figure than the figure previously discussed where only 20% of the annual visitors go to the

Tourist Information Centres or the Information Van. This is because the figure of 531,000 visitors per annum served in the Tourist Information Centres and the Information Booth was estimated based on the number of visitors who had been there in that particular year. However, the researcher took into account the visitors' past experiences of going to the Tourist Information Centre rather than whether they had been to the Tourist Information Centres only on the day when they were surveyed. Hence, considering the repeat visitors' experiences of visiting the Tourist Information Centres in the past, the number of visitors the Tourist Information Centres and the Information Booth had served over the period of years would be very high. Furthermore, part of the visitor survey process was conducted in the car parks of the Tourist Information Centres, especially during winter months and when the weather conditions were bad.

The survey of the Tourist Information Centres was because that the researcher intended to explore the role of the Tourist Information Centres play in providing services to visitors. Therefore, it was necessary to interview visitors who had used the Tourist Information Centres or the mobile Information Booth about their viewpoints of the services provided, staff and the maintenance of the Tourist Information Centres and the mobile Information Booth.

7.6.1 The Differences between First-time and Repeat Visitors' Awareness of the Tourist Information Centres before their Arrival at the New Forest

The analysis shows statistically significant differences between first-time and repeat visitors' awareness of the Tourist Information Centres and the mobile Information Booth before their arrival - that repeat visitors are more aware of the existences of the Tourist Information Centres. However, in terms of whether they have been to the Tourist Information Centres or the Information Booth, the research shows no statistically difference between first-time and repeat visitors (See Table 7.24).

Table 7. 24: The percentage of visitors' awareness of the existences of the Tourist Information Centres/Information Booth before arrival, and whether or not they had been there.

Visitor category	Awareness of the existence of the Tourist Information Centres before arrival at the New Forest (no. of visitors)	Whether or not have been to the Tourist Information Centres (no. of visitors)
ALL visitors	Aware of it - 91.8% (967)	Yes - 76.4% (805)
	Not aware of it - 8.2% (86)	No - 23.6% (248)
First-time visitors	Aware of it - 81.6% (252)	Yes - 78.6% (243)
	Not aware of it - 18.4% (57)	No - 21.4% (66)
Repeat visitors	Aware of it - 96.1% (715)	Yes - 75.5% (562)
	Not aware of it - 3.9% (29)	No - 24.5% (182)
Total number of visitors - 1,053		
First-time visitors – 309		
Repeat visitors – 744		

It is necessary to point out that Tourist Information Centres are more well-known than the mobile Information Booth. This is because the Tourist Information Centres are located in the village centres where they are connected with the road network and easily accessible by cars. In other words, they are managed and operated in a "centralised" manner (Stewart et al, 2001). As mentioned previously, the mobile Information Booth operates on a temporary basis - weekends of the summer months, and it is situated in the Bolderwood car park, which is unlikely to be the first stop for many visitors. As opposed to the Tourist Information Centres which serve visitors from a wider spectrum, the Information Booth only serves the visitors who go there at the time when it operates.

7.6.2 Visitors' Purposes of Going to the Tourist Information Centres and the Mobile Information Booth

Visitors go to the Tourist Information Centres for several reasons, including looking for specific information, just having a look around, looking for a shelter when the weather conditions turn bad, or some combination of these reasons. The analysis

shows statistically significant difference between the first-time and repeat visitors' reasons of going to the Tourist Information Centres. More than half of the sampled first-time visitors who had been to the Tourist Information Centres whose main purpose of going there was to look for specific information, whilst just a quarter of the responded repeat visitors claimed that their reason for going to the Tourist Information Centres was to have a look around (See Table 7.25).

Table 7. 25: Visitors' main purposes of going to the Tourist Information Centres.

Visitor category	Main reason of going to TICs – Looking for specific information (no. of visitors)	Main reason of going to TICs - Just having a look around (no. of visitors)	Main reasons for going to TICs - both for specific information and having a look around (no. of visitors)
First-time visitors	56.8% (138)	22.6% (55)	20.6% (50)
Repeat visitors	25.1% (141)	56.2% (316)	18.7% (105)

First-time visitors who had been to the TICs - 243 (Total number of first-time visitors - 309)
Repeat visitors who had been to the TICs - 562 (Total number of repeat visitors - 744)

The visitors were asked about their purpose of visit to the Tourist Information Centres or mobile Information Booth on the day when they were interviewed. Hence, in the case of the repeat visitors, "having a look around in it to see what is new" was more likely to be the reason that they visited the Tourist Information Centres. Most of the repeat visitors replied that they had been to the Tourist Information Centres to collect and/or enquire specific information when they were not familiar with the area. Since then they had purchased and collected site maps and other materials to help them explore the New Forest, therefore "looking for specific information" is no longer the main purposes they go to the Tourist Information Centres.

This suggests that many of the interpretive materials, including written materials and video tapes, have the capability of "keeping and storing the information for future use". Organised walks and talks, guided tours and live interpretation, of which the life span is much shorter than written materials, that is, visitors cannot "take" organised walks or guided tours home but only the experiences of participating in them.

Nonetheless, printed materials and video programmes can be taken home by the visitors and reviewed at their own pace and convenience. Most of all, visitors can take the written materials, especially site maps and guide books, with them when they next come to the site. Thus, it is less likely for repeat visitors to go to the Tourist Information Centres to seek for the same information they had collected before during their previous visits. Instead, they tend to go there to have a look and may be to purchase and/or gather other information to update the materials that they had collected before.

In short, visitors, especially those repeat ones, do not think that visiting the Tourist Information Centres or the mobile Information Booth is necessary every time they come to the New Forest, providing they think they already have the information they need to enable them exploring the site. This imposes a potential disadvantage in effective management of the visitors and the resources. Site-managing authorities regularly assess the recreational impact upon the New Forest resources and apply necessary strategies to counter the negative effects resulting from inappropriate visitor activities. These strategies include temporary or permanent closure of particular locations and tracks, resource hardening such as gravel paved walks and cycle tracks, provision of facilities such as barbecue sites and picnic tables, and restrictions on certain activities such as lighting camp fire. Furthermore, during timber harvest season, it is necessary to temporarily close a particular timber inclosure in order to ensure visitors' safety. Personnel, information boards and leaflets in the Tourist Information Centres and mobile Information Booth are ideal to provide the most updated information with respect to recent changes in the New Forest to visitors. Since not all the visitors intend to go to the Tourist Information Centres, some visitors may miss out such information. Therefore, it is necessary to use other form of media to inform visitors about these changes. Temporary signs, local press and displaying leaflets in local pubs, accommodation units and shops can be used to assist the role of Tourist Information Centres as information distribution centre to inform visitors of changes in the site. "What's on" information can also be distributed through these

communication channels, instead of relying only on the Tourist Information Centres to store and display information about the New Forest.

7.7 VISITORS' PERCEPTIONS OF THE EFFECTIVENESS OF THE MEDIA USED IN THE NEW FOREST IN DELIVERING DIRECTORIAL AND INTERPRETIVE INFORMATION, AND THEIR PREFERENCES OF MEDIA

As discussed in Chapter Two, the two main type of media employed to carry out the duty of providing welcoming, regulatory, directorial and interpretive information to visitors are personal media, such as guides, interpreters and site staff, and impersonal media, which include signs, displays, printed materials, audio cassettes, films, and computers. Some researchers suggest the personal communication with visitors is the most effective way of providing them with their required information (Sharpe and Hodgson, 1982). However, not all visitors like to participate in an interpretive activity or want to ask information from site staff, instead, they may prefer to rely on site map and/or signs to find their way around the destination. Moreover, personnel although have the advantage of being a warm and welcoming medium when greeting visitors (in comparison with signs or a computer screen), the cost of training and employing a staff or a guide is much higher than posing and maintaining a signage. In addition, the working hours of site staff is limited, sometimes even seasonal. During their off-duty hours, visitors need to depend on impersonal media, therefore, the importance of impersonal media cannot be overlooked.

When the survey was carried out in 1999, the on-site media used in the New Forest to carry out the delivery of welcoming, regulatory, directorial and interpretive information were staff in the Tourist Information Centres, Forestry Commission seasonal rangers, signs, bulletin boards, interpretive panels, a wide range of printed materials, and the New Forest Museum in Lyndhurst. Occasionally, television programmes were shown on the regional channel, the Meridian, and BBC South. There were also web sites where information about direction, accommodation booking and local events could be found. The staff in the Tourist Information Centres do not

provide guided activities, rather, their main duties are to provide information and assist visitors such as booking accommodation on visitors' behalf upon requested. A seasonal ranger was employed by the Forestry Commission during summer months to staff the mobile Information Booth in Bolderwood car park. In other words, there were few personnel-led interpretive activities available when the survey was conducted in 1999.

It is worth pointing out that since 1999 the Forestry Commission has undertaken a series of actions. In the summer of 2001, five seasonal rangers were employed between 9th July and 3rd September. Their duties included staffing the mobile Information Booth in Bolderwood car park, leading guided walks at Bolderwood and campsites, and patrolling the Crown Lands on bicycles. According to the Educational Officer of the Forestry Commission, the responses from campers who participated in guided walks in their campsites were that they enjoyed the activities. The Forestry Commission provided some figures of the number of visitors these five seasonal rangers engaged during the two months period in 2001 (See Table 7.26).

Table 7. 26: The Forestry Commission report of the number of visitors the seasonal rangers personally engaged during the period of 9th July and 3rd September 2001.

Location	No. of visitors
Cyclists engaged in cycle tracks	2,717
Visitors engaged in car parks (exc. Bolderwood)	3,240
Visitors engaged in the mobile Information Van in Bolderwood car park	11,275
Visitors engaged at the Deer Sanctuary in Bolderwood Walk	2,324
Campers participated in campsites guided walks (43 walks were led and the number of participants in each guided walk was roughly 15)	Approximately 700

Source: *Forestry Commission, 2002a, 2002b.*

The above figures indicate that Bolderwood is one of the busiest honey-pots in the New Forest, because the Forestry Commission placed a large portion of their limited manpower in there. Bolderwood offers a variety of attractions to visitors. Adjacent to the car park is a large Forest Lawn which offers visitors space to play, have a picnic

and rest. The other side of the car park has picnic tables, shades from trees, and the Deer Sanctuary. There are three walks in Bolderwood catered for visitors with different mobility: all walks are accessible in a wheelchair. Toilet block and ice cream van, which are appreciated and welcomed by the majority of the visitors, also can be found in Bolderwood. This poses a potential that Bolderwood might develop further in its interpretive functions by offering scheduled guided walks and talks, more sophisticated bulletin boards and interpretive panels to serve the large number of visitors to the spot.

In the research, five factors that contribute to an effective medium were identified: the medium should be user-friendly and easy understanding, information contents needs to be lively and dynamic, the quantity of the information contained should be sufficient, and the medium should be easily reachable or accessible. Five-point Likert scale is used to rank visitors' feelings for the general effectiveness of the medium/media, and the breakdown of the five factors of those media they had used prior to and during their visits to the New Forest.

7.7.1 Visitors' Perceptions of the Effectiveness of the Media in Communicating and Delivering Information

7.7.1.1 Visitors' perceptions of the effectiveness of printed materials in delivering information

Among the media available in the New Forest when the survey was carried out, including printed media, signs, staff of the Tourist Information Centres, New Forest Museum and television programmes, the most used by the sampled visitors was printed materials. 84% of the sample used at least one type of the printed medium, and their general perceptions of the printed materials and the five factors of the printed medium in communicating with them were shown in Table 7.27.

Table 7. 27: Visitors' perceptions of the effectiveness of printed materials in delivering information about the New Forest.

Printed media (883 respondents, 83.9% of the total samples)	
Statistical information: mean and standard deviation	
General perceptions	Mean - 4.37 Std. Deviation - .69
Factor 1 - User friendly	Mean - 4.42 Std. Deviation - .66
Factor 2 - Easy understanding information contained in the printed materials	Mean - 4.40 Std. Deviation - .69
Factor 3 - Lively and dynamic information delivered via printed materials	Mean - 4.20 Std. Deviation - .79
Factor 4 - Sufficient information contained in the printed materials	Mean - 4.29 Std. Deviation - .87
Factor 5 - Easily reachable	Mean - 4.38 Std. Deviation - .75

The variety of printed materials available to purchase and collect is of a wide range, such as the Official Map of the New Forest, Official Cycle Map, OS map, guide books of walks, local history and wildlife, and leaflets of local and regional events and commercial attractions. During the survey, the researcher noticed that many of the visitors purchased and used the Official Map of the New Forest, which was prepared by the New Forest District Council, to guide them around the site. Also, some of the cycling visitors interviewed used the Official Cycle Map that was designed and published by the Forestry Commission. The small number of visitors who responded negatively about the effectiveness of the printed medium happened to use the Official Map and the Official Cycle Map. They thought the maps were too simplified and therefore the directorial information offered in these maps was confusing.

When the researcher interviewed the Tourism and Publicity Officer of the New Forest District Council, the Officer was informed that a small number of surveyed visitors thought the Official Map of the New Forest was not sufficient in providing them with directorial information. The researcher also enquired whether the District Council would consider improving the contents of their Official Map of the New Forest by adding more detailed directorial information about smaller roads and tracks to the

existing Map. The Officer replied that the major concern of simplifying the Official Map was to leave out some sensitive locations in the New Forest where human-environment interactions should be limited from the Map. Instead of providing detailed directorial information and advise visitors not to go to those sensitive areas, they considered the more effective approach was not to include those routes leading to the fragile areas in the Map at all. The concern that putting a “no” sign may be more likely to arouse visitors’ interests or curiosity to explore those sensitive areas. Thus, the directorial information provided in the Official Map is the routes leading to areas suitable to sustain recreational uses.

The New Forest District Council’s approach of “concealing” directorial information about sensitive areas in the site is equivalent to the Forestry Commission’s strategy of facility provision in their car parks in the Crown Lands. Car parks adjacent to fragile areas such as heath lands and Ancient and Ornamental Woodlands were either closed down or their capacity was reduced in order to discourage visitors from entering those areas. On the other hand, car parks were developed and facilities such as picnic tables and toilet blocks were provided in more robust areas where recreational activities are encouraged and can be sustained, such as in timber inclosures.

Prohibiting visitors from entering sensitive sites and carrying out inappropriate activities is an effective approach to manage resources in a tourism destination. However, it is necessary to provide alternatives to visitors, if the tourism is to be developed. The provision of alternative locations and activities for visitors to explore and enjoy is in fact an effective way of managing visitor flows and protecting fragile resources. Furthermore, information of those sensitive locations and resources can be provided to visitors via media such as films, living history (live interpretation), printed materials and computer to fulfil visitors’ interests and curiosity and to enhance their understanding of the site.

7.7.1.2 Visitors' perceptions of the effectiveness of personnel in the Tourist Information Centres and the mobile Information Van in providing information

As discussed earlier, when the survey was carried out, there was little interpreter-led guided walks or talks in the New Forest. Hence, the interactions between visitors and personnel then were limited to enquiring information from the staff in the Tourist Information Centres and the mobile Information Booth. Just over a quarter of the sampled visitors enquired information from the personnel, and mainly was in the Tourist Information Centres. The table below provides the responded visitors' perceptions of the personnel's ability and effectiveness in delivering information and communicating with them (See Table 7.28).

Table 7. 28: Visitors' perceptions of the effectiveness of personnel in delivering information about the New Forest.

Personnel (275 respondents, 26.1% of the total samples)	
Statistical information: mean and standard deviation	
General perceptions	Mean - 4.52 Std. Deviation - .58
Factor 1 - Friendly and helpful	Mean - 4.61 Std. Deviation - .54
Factor 2 - Easy understanding information they provided	Mean - 4.54 Std. Deviation - .59
Factor 3 - Lively and dynamic information they provided	Mean - 4.33 Std. Deviation - .74
Factor 4 - Sufficient information they provided	Mean - 4.46 Std. Deviation - .61
Factor 5 - Easily approachable	Mean - 4.56 Std. Deviation - .59

In general, those visitors who had personal encounters with the site staff felt the personnel were effective and helpful. However, the number of visitors who had face-to-face contact with the personnel was low. Given the fact that the available printed materials in the Tourist Information Centres and the mobile Information Booth covers a wide spectrum of aspects of the New Forest, seeking information from the staff seems unnecessary. Referring to Table 7.26 of the number of visitors the Forestry

Commission's seasonal rangers encountered during a period of two months in 2001, campsites, walks, cycle tracks and the Deer Sanctuary were chosen locations to post these seasonal rangers. This is because these areas are the focal points that visitors go to and carry out outdoor activities.

In spite of the dearth of information relating to the visitors that appreciated and enjoyed the interactions with the site personnel, there was enough to suggest to the Educational Officer at the Forestry Commission, that it was a positive aspect of their visit experiences. Consequently, the Forestry Commission planned further advertisements to recruit seasonal rangers for 2002 and the near future to lead the guided walks, patrol the Crown Lands and to assist visitors in the New Forest. Thus, the feedback from visitors should be positive, or the Forestry Commission would not spare their limited human resource to undertake such interpretive activity. When the status of the New Forest as a national park is certain (it is undergoing public enquiry at the moment), the funds for interpretation services would be more sufficient. By then it may be worth considering plan and implement the attended interpretive services in some of the focal attractions in the site.

7.7.1.3 Visitors' perceptions of the effectiveness of the New Forest Museum in delivering information

Only 16% of the sampled visitors had been to the New Forest Museum before. The New Forest Museum is located in Lyndhurst, and the Tourist Information Centre shares the same building with the Museum. The Museum consists of a souvenir shop, indoor exhibition and audio-visual show. The Museum is privately owned and run, and the main source of funding is from the entrance charges for the exhibition and audio-visual section. This may be one of the reasons that reduced visitors' interests in going to the Museum. The exhibition is about the geology, brief history, flora and fauna, and commoner's life style in the New Forest. The video programme contains more detailed information of the landscape.

Audio-visual programmes can be an effective and powerful medium to provide educational interpretation to visitors. One example is the film of the formation of the Grand Canyon and its discovery by the first white people shown in I-Max theatre in the Grand Canyon National Park. The film contains information of the geology of the Canyon and the adventure of the first white people who explored River Colorado. It also gives audiences a bird-eye view of the Canyon, which accomplishes many visitors' wishes of seeing the whole Grand Canyon.

The responded visitors perceptions of the effectiveness of the New Forest Museum is shown in Table 7.29.

Table 7. 29: Visitors' perceptions of the effectiveness of the New Forest Museum in delivering information about the New Forest.

Printed media (171 respondents, 16.2% of the total samples)	
Statistical information: mean and standard deviation	
General perceptions	Mean - 4.43 Std. Deviation - .69
Factor 1 - User friendly of the exhibition and the video programme	Mean - 4.51 Std. Deviation - .62
Factor 2 - Easy understanding information	Mean - 4.50 Std. Deviation - .64
Factor 3 - Lively and dynamic information delivered through exhibition and the video programme	Mean - 4.29 Std. Deviation - .84
Factor 4 - Sufficient information contained in the exhibition and the video programme	Mean - 4.23 Std. Deviation - .87
Factor 5 - Easily accessible	Mean - 4.41 Std. Deviation - .72

According to Tilden (1977), interpretation programmes or activities specifically catered for children should not be a diluted version of the interpretation to adult visitors, but should better be a separated programme tailor made with children in mind. A sampled visitor's 10-year-old daughter gave the researcher a valuable insight into a child's perceived "good" exhibition. She commented that the exhibition in the Museum was "ok", but would like to have more hands-on experiments included in the exhibition. Touching is an important sense for human beings, and for children

touching might form an essential part of their sense of an object. In fact, many people experience the situation that we want to touch and to feel an object, but because of certain rules or restrictions that prevent us from touching it, such as a glass compartment in a museum or a rope separating viewers from paintings in an art gallery. This girl's comments on the exhibition in the New Forest Museum may reflect many other children as well as adult visitors' perceptions about the exhibitions and the video programme in the Museum, that the display and presentation of the information could be more lively, dynamic and interactive, instead of the old fashioned style of separating viewers from the objects.

7.7.1.4 Visitors' perceptions of the effectiveness of the signs in delivering information

Signs were the second most used medium by the sampled visitors in the New Forest, that 72.9% of the samples used the signs to guide around the site. Signs are used to delivery directorial, welcoming, regulatory and interpretive information in the New Forest, in other words, they are used extensively. Signs are versatile, the shape, material and size can vary in accordance with the surrounding and the purposes of the information they contained. Moreover, they assist visitors greatly when other type of media is not available (Ham, 1992; McIntosh, 1982). For instance, in remote locations where posing a manned information centre is not cost-effective, a visitor needs to depend on alternative media such as printed material and signs to help them explore the area. Signs are on duty once they are put up, providing they are not vandalised or deteriorated after a period of time. Moreover, the cost of producing and maintaining signs are relatively cheap, as opposed to training and employing staff or maintaining high technology equipment such as a computer.

The visitors who responded felt that the signs in the New Forest were just above average, which suggests that some improvements may be necessary (See Table 7.30). 26% of the visitors thought the signs were poor and very poor in the factor of lively

and dynamic, 32.8% felt the information quantity was not sufficient, and 25% did not think the signs could be seen easily.

Table 7. 30: Visitors' perceptions of the effectiveness of the signs in delivering information about the New Forest.

Signs, bulletin boards, interpretive panels (768 respondents, 72.9% of the total samples)	
Statistical information: mean and standard deviation	
General perceptions	Mean - 3.57 Std. Deviation - .86
Factor 1 - User friendly of the signs	Mean - 3.63 Std. Deviation - .87
Factor 2 - Easy understanding information contained in signs	Mean - 3.56 Std. Deviation - .91
Factor 3 - Lively and dynamic information delivered via signs	Mean - 3.19 Std. Deviation - 1.01
Factor 4 - Sufficient information contained in signs	Mean - 3.01 Std. Deviation - 1.04
Factor 5 - Easily viewable	Mean - 3.26 Std. Deviation - 1.07

The above results point to the fact that the signs in the New Forest lack all the factors that make them an effective communication medium. Referring to Table 7.14 and the followed discussion of the physical conditions of the tourism support facilities, visitors' perceptions of the management and maintenance of the signs were not particularly high either. Except for the position of the signs, font, information contents that visitors were not satisfied, some commented that they wish there would be more interpretive panels similar to those ones along the Tall Tree Walks to provide them with interpretive information. This is an interesting and valuable feedback from the visitors.

The Forestry Commission was concerned that an increased number of signage is likely to "urbanise" the New Forest, making the site overly developed and losing its natural and historical significance. Therefore, they are cautious about placing interpretive panels in the Crown Lands where are managed by them. This viewpoint is arguable. Road signs provide essential directorial information and should be placed before a

junction or a crossroad. Signs for regulatory purposes such as speed limit and animal feeding are abundant, and some have been vandalised or deteriorated but not yet mended or replaced. Interpretive signs can only be found along the Tall Tree Walks and the Deer Sanctuary, despite the vast size of the site and the number of trails and cycle tracks. In other words, the functions of signs are imbalance, with the concentration upon delivering directorial and regulatory information but weak in providing interpretation function. The vandalised and deteriorated signs look more “urban” or “inner city” than appropriately designed and maintained interpretive panels. Furthermore, it is not necessary to place interpretive panels along all the walks or tracks. Wildlife and landscape which is site specific, in other words, they have the interpretive value, should be contained in interpretive panels, but not all the features need to be included in interpretation.

7.7.1.5 Visitors’ perceptions of the effectiveness of television programmes in delivering information

As mentioned earlier, occasionally television programmes about the New Forest are shown on the regional channels, the Meridian and BBC South. In other words, the number of viewers may be limited because the distribution of these programmes is confined to the local region. Mass media in fact are not used widely for the purpose of interpretation, because the target, that is, the potential visitors for a particular tourism destination, is difficult to identify when the communication media is of mass media type. Most of the media used to communicate with visitors are specifically planned, designed and implemented with the notion of “for visitors’ uses” in mind. Also, most of the directorial, regulatory and interpretive information does not reach to visitors until they are about to enter, or even already arrived at, the destination. For instance, driving to the New Forest from Greater London via M3 and M27, except for information on road signs indicating the distance to Lyndhurst, there is little information about the New Forest. The welcoming and more detailed directorial information is not seen until a visitor enters the New Forest.

This “site specific” and “for visitors’ uses” trend in communicating with visitors is because of human nature - we do not memorise all the information we receive in our daily lives, because a large portion of the daily information input is classified as “not relevant” or “not important”. Hence, for managing agencies to use mass media to communicate with their potential visitors is not effective and may be expensive. However, mass media is ideal to pass information of a tourism destination to a wide range of audiences to arouse their interests of visiting the site. In other words, mass media can be used as a marketing channel to make visitors come to be aware of the destination: one can see that information of holiday destinations, prices, new destinations, and new attractions flood newspaper, magazines and television programmes.

There is an interesting trend, the appearance of information about a particular destination coincides with the weather conditions in both the home country as well as the destination country. Winter months in the Northern Hemisphere when people seek sunshine and warmth, destinations such as tropical countries, the Caribbean, South Africa and Australia are the major holiday products in the mass media (winter sun). There are no advertisements for holidays in Middle Eastern countries on television until autumn, when the destinations start cooling down and the weather becomes cold in Northern Europe. Mass media are ideal to sending out information to a large number of audiences, and in the case of television programmes, the combination of audio and visual effects are likely to provoke potential visitors’ interests of visiting a particular destination. When they finally arrive at the site, other types of media, such as printed materials, signs and personnel would take over the role of information provision. In short, mass media are effective when used to increase potential visitors’ knowledge of a destination, but in terms of directorial, regulatory and interpretive purposes, the function of mass media is likely to fall short.

Only 20.5% of the sampled visitors had seen television programmes about the New Forest. They felt the quantity of the information contained in the programmes they had watched and the frequencies of the programmes appear in television should be

improved (See Table 7.31). Considering the fact that these viewers are the residents in the South of England, they may have visited the New Forest a number of times. Hence, the information contained in the television programmes about the site may have been known by the visitors. If the programmes were designed as marketing instrument to make potential visitors aware of the destination, the programmes should be shown more frequently and for nation-wide campaign. On the other hand, if the programmes were designed to enhance viewers' knowledge of the special features and landscape of the New Forest, the depth of the information might need improvement. That is, in accordance with the purposes of these televised programmes, the timing, distribution and programme contents should be adjusted consequently in order to achieve the best possible results.

Table 7. 31: Visitors' perceptions of the effectiveness of television programmes in delivering information about the New Forest.

Television programmes (216 respondents, 20.5% of the total samples)	
Statistical information: mean and standard deviation	
General perceptions	Mean - 4.07 Std. Deviation - .52
Factor 1 - User friendly of the television programmes	Mean - 4.14 Std. Deviation - .50
Factor 2 - Easy understanding information contained in television programmes	Mean - 4.17 Std. Deviation - .50
Factor 3 - Lively and dynamic information delivered via television programmes	Mean - 4.11 Std. Deviation - .52
Factor 4 - Sufficient information contained in television programmes	Mean - 3.95 Std. Deviation - .67
Factor 5 - Frequent appearances of the programmes	Mean - 3.57 Std. Deviation - .97

7.7.2 The Comparison between Visitors' Perceptions of the Media and Types of Visitor

7.7.2.1 The differences between first-time and repeat visitors' uses and perceptions of the printed material

First-time and repeat visitors may have different perceptions about the effectiveness of printed materials they used during their visits to the site due to their different degrees of familiarity with the site. The analysis shows statistical significance in repeat visitors who hold better opinions about the printed materials, as well as the five factors of effective communication. Repeat visitors' familiarity with the site adds ease and comfort to their exploration of the area. Because they already possess some knowledge of the site, their dependence upon printed materials would be less than of those first-time visitors. In turn, they are likely to be less nit picking about the printed material. On the other hand, repeat visitors may have purchased and used more than one of the printed media during their previous visits to the site, thus they may be more accustomed to using the relevant ones according to the area they plan explore or the activity they want to participate in.

7.7.2.2 The differences between first-time and repeat visitors' uses and perceptions of the site personnel

The research results show no statistical significance between first-time and repeat visitors' opinions of the effectiveness of personnel in delivering information. Nevertheless, it is worth pointing out that among the 275 visitors who enquired information from personnel, 110 of them were first-time visitors, which account for 36% of the total 309 first-time visitors. On the other hand, 165 repeat visitors who had face-to-face contact with the personnel only accounted for 22% of the 744 repeat visitors. The higher proportion of the first-time visitors who had personal contact with the site personnel suggests that for them, site personnel might provide a short cut to obtaining the information they required. That is, by seeking information directly from

site personnel it was convenient because they can save the first-time visitors time, hassle and frustration of going through numerous printed materials or looking for signs.

7.7.2.3 The differences between first-time and repeat visitors' uses and perceptions of the New Forest Museum

The findings show no statistical significance in the first-time and repeat visitors' mean scores of their perceptions of the effectiveness of the New Forest Museum in providing them with information about the site. Less than 5% of the first-time visitors had been to the Museum, whilst the figure is higher among the repeat visitors, that 21% of them had seen the exhibition and video programme in the Museum. The different proportion of the first-time and repeat visitors' going to the Museum is likely to be because of how the visitors weigh, or prioritise, the activities they plan to carry out in the site. For first-time visitors, exploring the site and undertaking activities are more exciting or important than going to the Museum. They are likely to think that they would go to the Museum when they come to the site the next time, but the priority for their first visit to the site would be going around the site to see it themselves.

This is not an uncommon phenomenon. For example, a visitor coming to Bournemouth for the first time have a choice of locations where they can spend their time such as the beach, Poole, Christchurch, the surrounding harbour area, perhaps the New Forest. The Russell Cotes Museum would not be their top choice to visit, because the main reason that they came to Bournemouth may not have been to spend their time indoors looking at paintings. Similarly, the exhibition and the video programmes shown in the New Forest Museum are about the New Forest, in such a case, first-time visitors are less likely to weigh the Museum significantly on their "things to do and see in the New Forest" list. This is especially the case when these first-time visitors only planned to come to the New Forest for a day out. Their available time to spend in the site is limited, therefore, the Museum is unlikely to be the most important place to

visit. Among the 15 first-time visitors who had been to the Museum, 5 of them were excursionists (33%), whilst the remaining 10 were staying overnight in the New Forest.

This is not an ideal situation in terms of the interpretation role the Museum plays among all other types of media. The Museum misses out on the opportunity to provide essential interpretive and administrative information to first-time visitors prior to their exploration of the New Forest. Information such as visitors' safety concerns, appropriate activities to participate in, suitable areas to explore, and the special landscape and wildlife of the New Forest can enhance visitors' understanding and experiences of the site. However, the sampled visitors lacked interest in spending time and money to go to the Museum. The managing agency of the Museum may like to research into the visitors' preferences of the exhibitions, displays, and video programmes in terms of the themes, contents and media used, if the Museum wants to improve its function of interpretation.

7.7.2.4 The differences between first-time and repeat visitors' uses and perceptions of the signs, bulletin boards and interpretive panels

The findings show statistical significance in first-time and repeat visitors perceptions of the effectiveness of signs in delivering information in the New Forest. The results also show differences in their perceptions of two but not all of the factors of effective communication - user friendly and easy understanding. First-time visitors' mean scores of their general perceptions of the signs and the two factors mentioned above are lower than of those repeat visitors. Similar to the visitors' perception of the printed material, visitors' perceptions of the effectiveness of the signs in providing them with information is related to their degree of familiarity with the site.

First-time visitors have limited knowledge of the directions and features of the New Forest. Since most of the signs in the New Forest contain regulatory and directorial information, the information that first-time visitors had seen was of directorial or

regulatory types, which does not enhance their enjoyment or understanding. Referring to the previous discussion, first-time visitors' perceptions of the physical conditions of the signs were lower than of those repeat visitors (See Table 7.15), and all the responded visitors thought the signs were just above average in delivering information (See Table 7.30). Hence, the first-time visitors may experience frustration resulting from getting lost and fatigue. In turn, they are less likely to be satisfied by the information contained in signs, and their experiences of visit are also likely to be decreased. Since the findings so far suggest that signs in the New Forest are not quite up to the visitors' expectation, the responsible authorities may wish to make improvements accordingly.

7.7.2.5 The differences between first-time and repeat visitors' uses and perceptions of the television programmes

The 216 visitors who had watched television programmes about the New Forest viewed the programmes prior to their arrival to the site. As mentioned previously, mass media tends to be used as a marketing channel to make visitors aware of and arouse their interests in a tourism destination. The analysis shows no findings of statistical significance between first-time and repeat visitors' mean scores in terms of their perceptions as to the effectiveness of television programmes in providing them with information. Nevertheless, repeat visitors are associated with a higher mean score in terms of their perceptions of two of the factors – lively and dynamic information contents and quantity of information in the television programmes. This is likely to be because repeat visitors can relate the information to their visit experiences, hence they have higher perceptions of the programmes.

It is worth noting that out of 309 first-time visitors, only 14 (4.5%) of them had seen televised programmes about the New Forest, and only 20.5% of the total sampled visitors had seen such programmes. Referring to earlier discussion, the responded visitors' perceptions of the quantity of the information contained in the television programmes and the frequencies of the shows indicate improvements are necessary. If

the managing authorities plan to target as many potential visitors as possible to channel their administrative, regulatory and interpretive information to them prior to their arrival at the site, certainly the frequencies of appearance of the television programmes and the information contents need to be increased and developed further. In addition, it may be useful to target first-time visitors in conjunction with other type of media, such as providing web site and postal addresses in the mass media programmes to enable first-time visitors to search and enquire more information about the site.

7.7.3 The Comparison between Repeat Visitors' Frequencies of Visiting the New Forest and their Perceptions of the Media

One-analysis of variance (ANOVA) is used to compare the mean scores of the repeat visitors' perceptions of the media they used based on their frequencies of visiting the New Forest. The research went on to explore whether visitors' familiarity with the site had an impact on their perceptions of the media in delivering information to them.

7.7.3.1 The repeat visitors' frequencies of visiting the New Forest and their perceptions of printed materials

609 repeat visitors used printed materials during their visits to the site, and the findings show statistically significant differences between those who visit the site one to two times a year and those infrequent visitors (visiting the site less than once in a year). Nevertheless, despite this, the differences in their mean scores are quite small (See Table 7.32).

Table 7. 32: The results of ANOVA test of repeat visitors' frequencies of visiting the New Forest and their perceptions of printed materials (symbols * and † indicate statistically significant differences between the two corresponding groups).

Printed materials - 609 repeat visitors		
Frequencies of visit per annum (no. and % among the 609 repeat visitors)	Mean	Std. Deviation
More than 10 times per annum - 133 (21.8%)	4.36	.81
6-10 times per annum - 55 (9%)	4.45	.50
3-5 times per annum - 83 (13.6%)	4.43	.55
1-2 times per annum - 159 (26.1%) *	4.33	.61
Infrequent, less than one visit per annum - 179 (29.4%) *	4.54	.58
Factor 1 - user friendliness of printed media		
More than 10 times per annum - 133 (21.8%)	4.41	.80
6-10 times per annum - 55 (9%)	4.49	.50
3-5 times per annum - 83 (13.6%)	4.43	.52
1-2 times per annum - 159 (26.1%) *	4.35	.65
Infrequent, less than one visit per annum - 179 (29.4%) *	4.59	.58
Factor 2 - easy understanding information in printed media		
More than 10 times per annum - 133 (21.8%)	4.38	.85
6-10 times per annum - 55 (9%)	4.51	.50
3-5 times per annum - 83 (13.6%)	4.42	.52
1-2 times per annum - 159 (26.1%) *	4.35	.59
Infrequent, less than one visit per annum - 179 (29.4%) *	4.56	.59
Factor 3 - Lively and dynamic information in printed media		
More than 10 times per annum - 133 (21.8%) †	4.19	.95
6-10 times per annum - 55 (9%)	4.29	.60
3-5 times per annum - 83 (13.6%)	4.23	.63
1-2 times per annum - 159 (26.1%) *	4.14	.69
Infrequent, less than one visit per annum - 179 (29.4%) * †	4.47	.65
Factor 4 - Sufficient information contained in printed media		
More than 10 times per annum - 133 (21.8%) †	4.19	1.11
6-10 times per annum - 55 (9%)	4.42	.60
3-5 times per annum - 83 (13.6%)	4.28	.69
1-2 times per annum - 159 (26.1%) *	4.26	.80
Infrequent, less than one visit per annum - 179 (29.4%) * †	4.53	.77
Factor 5 - High accessibility of the printed media		
More than 10 times per annum - 133 (21.8%) †	4.34	.93
6-10 times per annum - 55 (9%)	4.55	.50
3-5 times per annum - 83 (13.6%)	4.42	.54
1-2 times per annum - 159 (26.1%) *	4.43	.58
Infrequent, less than one visit per annum - 179 (29.4%) * †	4.57	.62

The results show that the mean scores of the infrequent visitors were higher than those of other visitors. This may be because they use the printed materials infrequently, it is less likely for them to criticise the information quantity, contents and the quality of printed materials. Also, because they do not visit the site often, when they do come to the site they are likely to feel excited and such feelings might subdue some of their criticism of the printed materials they used during their visits to the site.

7.7.3.2 The repeat visitors' frequencies of visiting the New Forest and their perceptions of site personnel they encountered

165 repeat visitors made personal contact with the site personnel in order to acquire information from them. The findings demonstrate statistically significant differences between the mean scores of those frequent visitors who come to the site more than 10 times per annum and of those visiting the site 3 to 5 times per annum, and between those frequent visitors and those infrequent visitors (See Table 7.33).

Although statistically the findings show significant differences between groups, the mean scores did not vary in great deal. The findings show that infrequent visitors have higher perceptions of the personnel they had encountered with than the frequent visitors, which suggests frequent visitors may have higher expectation for the site personnel. However, because frequent visitors' knowledge of the site is more extensive than of those infrequent visitors, in turn, frequent visitors may anticipate the staff from whom they had come to enquire information provide them with comprehensive and wide-ranging information. In other words, because their expectation is high, they may be more critical about or slightly more difficult to be satisfied with the assistance offered by the site personnel. Nevertheless, the differences of the mean scores between the groups are small, and in general, these visitors thought the staff were helpful, friendly and effective communicators to provide them with required information.

Table 7. 33: The results of analysis of repeat visitors' frequencies of visiting the New Forest and their perceptions of site personnel (symbols * and † indicate statistically significant differences between the two corresponding groups).

Site personnel - 165 repeat visitors		
Frequencies of visit per annum (no. and % among the 165 repeat visitors)	Mean	Std. Deviation
More than 10 times per annum - 38 (23%) † *	4.21	.62
6-10 times per annum - 8 (4.8%)	4.63	.52
3-5 times per annum - 29 (17.6%) †	4.59	.50
1-2 times per annum - 50 (30.3%)	4.50	.51
Infrequent, less than one visit per annum - 40 (24.2%) *	4.78	.42
Factor 1 - Friendliness of the personnel		
More than 10 times per annum - 38 (23%) *	4.45	.50
6-10 times per annum - 8 (4.8%)	4.75	.46
3-5 times per annum - 29 (17.6%)	4.52	.51
1-2 times per annum - 50 (30.3%)	4.58	.50
Infrequent, less than one visit per annum - 40 (24.2%) *	4.75	.44
Factor 2 - Easily understandable information provided by personnel		
More than 10 times per annum - 38 (23%) *	4.39	.50
6-10 times per annum - 8 (4.8%)	4.75	.46
3-5 times per annum - 29 (17.6%)	4.52	.51
1-2 times per annum - 50 (30.3%)	4.50	.51
Infrequent, less than one visit per annum - 40 (24.2%) *	4.72	.45
Factor 3 - Lively and dynamic information provided by personnel		
More than 10 times per annum - 38 (23%) *	4.08	.71
6-10 times per annum - 8 (4.8%)	4.50	.76
3-5 times per annum - 29 (17.6%)	4.34	.61
1-2 times per annum - 50 (30.3%)	4.36	.53
Infrequent, less than one visit per annum - 40 (24.2%) *	4.55	.60
Factor 4 - Sufficient information provided by personnel		
More than 10 times per annum - 38 (23%) *	4.24	.63
6-10 times per annum - 8 (4.8%)	4.50	.76
3-5 times per annum - 29 (17.6%)	4.55	.51
1-2 times per annum - 50 (30.3%) †	4.40	.49
Infrequent, less than one visit per annum - 40 (24.2%) * †	4.75	.44
Factor 5 - Highly approachable		
More than 10 times per annum - 38 (23%) *	4.37	.49
6-10 times per annum - 8 (4.8%)	4.75	.46
3-5 times per annum - 29 (17.6%)	4.55	.51
1-2 times per annum - 50 (30.3%)	4.52	.50
Infrequent, less than one visit per annum - 40 (24.2%) *	4.75	.44

7.7.3.3 The repeat visitors' frequencies of visiting the New Forest and their perceptions of the New Forest Museum

Among the 171 visitors who had been to the New Forest Museum, 156 of them were repeat visitors (91.2%). The research shows statistically significant differences in the mean scores in two of the factors of effective medium (See Table 7.34). Frequent visitors who come to the site more than 10 times per annum demonstrate higher mean scores in factor 4, the sufficiency of information presented in the Museum exhibition and video programme. This suggests that frequent visitors' familiarity with and more extensive knowledge about the site help them relate to and understand more of the exhibited objects and the video programme. Interestingly, repeat visitors who come to the site 6 to 10 times per annum show lower opinions of the sufficiency of the information provided by the New Forest Museum, same as the visitors come to the site once or twice a year. This might be because they expect the Museum to function better than what they had experienced in terms of its role in interpretation. They may have been to other Museums elsewhere that perform better in the interpretation function, and therefore they found the New Forest Museum fell short in providing them with sufficient information about the site.

Table 7. 34: The results of analysis of repeat visitors' frequencies of visiting the New Forest and their perceptions of the New Forest Museum (symbols *, † and ‡ indicate statistically significant differences between the two corresponding groups).

The New Forest Museum - 156 repeat visitors		
Frequencies of visit per annum (no. and % among the 156 repeat visitors)	Mean	Std. Deviation
More than 10 times per annum - 58 (37.2%)	4.50	.50
6-10 times per annum - 9 (5.8%)	4.00	.50
3-5 times per annum - 17 (10.9%)	4.41	.87
1-2 times per annum - 30 (19.2%)	4.20	.71
Infrequent, less than one visit per annum - 42 (26.9%)	4.62	.76
Factor 1 - User friendliness of the New Forest Museum		
More than 10 times per annum - 58 (37.2%)	4.57	.50
6-10 times per annum - 9 (5.8%)	4.33	.71
3-5 times per annum - 17 (10.9%)	4.41	.87
1-2 times per annum - 30 (19.2%)	4.33	.61
Infrequent, less than one visit per annum - 42 (26.9%)	4.67	.61
Factor 2 - Easy understanding information of the exhibition and video programme in the Museum		
More than 10 times per annum - 58 (37.2%)	4.60	.49
6-10 times per annum - 9 (5.8%) *	4.00	.50
3-5 times per annum - 17 (10.9%)	4.41	.87
1-2 times per annum - 30 (19.2%)	4.30	.60
Infrequent, less than one visit per annum - 42 (26.9%) *	4.64	.69
Factor 3 - Lively and dynamic exhibition and video programme in the Museum		
More than 10 times per annum - 58 (37.2%)	4.38	.67
6-10 times per annum - 9 (5.8%)	3.89	.60
3-5 times per annum - 17 (10.9%)	4.12	.86
1-2 times per annum - 30 (19.2%)	4.17	.87
Infrequent, less than one visit per annum - 42 (26.9%)	4.45	.99
Factor 4 - Sufficient information presented in the exhibition and the video programme		
More than 10 times per annum - 58 (37.2%) * †	4.43	.65
6-10 times per annum - 9 (5.8%) * ‡	3.44	.73
3-5 times per annum - 17 (10.9%)	4.18	.81
1-2 times per annum - 30 (19.2%) †	3.90	.88
Infrequent, less than one visit per annum - 42 (26.9%) ‡	4.48	1.02
Factor 5 - Highly accessible to the New Forest Museum exhibition and video programme		
More than 10 times per annum - 58 (37.2%)	4.53	.57
6-10 times per annum - 9 (5.8%)	4.44	.53
3-5 times per annum - 17 (10.9%)	4.41	.87
1-2 times per annum - 30 (19.2%)	4.27	.45
Infrequent, less than one visit per annum - 42 (26.9%)	4.40	.94

7.7.3.4 The repeat visitors' frequencies of visiting the New Forest and their perceptions of the signs, bulletin boards and interpretive panels

The findings from the analysis show no statistically significant differences between the visitor groups and their perceptions of the effectiveness of signage in delivering information in general. But there are differences in visitors' opinions about the sufficiency of the information contained in signs in two sets of the visitor groups (See Table 7.35). The findings show differences in mean scores in visitors' perceptions of the sufficiency of the information contained in signs between frequent visitors and those who visit the site 3 to 5 times per annum. The results also show differences between visitors who come to the site 3 to 5 times per year and those whose frequencies of visit are 1 to 2 times a year. Again, despite being statistically significant, the mean scores do not differ very much.

Table 7. 35: The results of analysis of repeat visitors' frequencies of visiting the New Forest and their perceptions of signs (symbols * and † indicate statistically significant differences between the two corresponding groups).

Signs, bulletin boards and interpretive panels - 631 repeat visitors		
Frequencies of visit per annum (no. and % among the 631 repeat visitors)	Mean	Std. Deviation
More than 10 times per annum - 155 (24.6%)	3.63	1.02
6-10 times per annum - 66 (10.5%)	3.53	.92
3-5 times per annum - 91 (14.4%)	3.54	.79
1-2 times per annum - 160 (25.4%)	3.66	.82
Infrequent, less than one visit per annum - 159 (25.2%)	3.63	.71
Factor 1 - User friendliness of the signs, bulletin boards and interpretive panels		
More than 10 times per annum - 155 (24.6%)	3.68	1.02
6-10 times per annum - 66 (10.5%)	3.56	.95
3-5 times per annum - 91 (14.4%)	3.65	.78
1-2 times per annum - 160 (25.4%)	3.72	.82
Infrequent, less than one visit per annum - 159 (25.2%)	3.62	.80
Factor 2 - Easy understanding information contained in signs, bulletin boards and interpretive panels		
More than 10 times per annum - 155 (24.6%)	3.63	1.05
6-10 times per annum - 66 (10.5%)	3.52	.95
3-5 times per annum - 91 (14.4%)	3.46	.86
1-2 times per annum - 160 (25.4%)	3.69	.86
Infrequent, less than one visit per annum - 159 (25.2%)	3.57	.81
Factor 3 - Lively and dynamic information in signs, bulletin boards and interpretive panels		
More than 10 times per annum - 155 (24.6%)	3.34	1.10
6-10 times per annum - 66 (10.5%)	3.12	1.13
3-5 times per annum - 91 (14.4%)	3.02	1.00
1-2 times per annum - 160 (25.4%)	3.21	1.01
Infrequent, less than one visit per annum - 159 (25.2%)	3.16	.94
Factor 4 - Sufficient information in signs, bulletin boards and interpretive panels		
More than 10 times per annum - 155 (24.6%) *	3.19	1.12
6-10 times per annum - 66 (10.5%)	2.97	1.16
3-5 times per annum - 91 (14.4%) * †	2.77	1.00
1-2 times per annum - 160 (25.4%) †	3.16	1.01
Infrequent, less than one visit per annum - 159 (25.2%)	2.91	.94
Factor 5 - Highly viewable of the signs, bulletin boards and interpretive panels		
More than 10 times per annum - 155 (24.6%)	3.44	1.15
6-10 times per annum - 66 (10.5%)	3.20	1.04
3-5 times per annum - 91 (14.4%)	3.19	1.01
1-2 times per annum - 160 (25.4%)	3.38	1.08
Infrequent, less than one visit per annum - 159 (25.2%)	3.18	.97

The finding suggests that frequent visitors' familiarity with the site helps to reduce their dependence on signs, bulletin boards and interpretive panels, hence they think the information contents of signs are sufficient. On the other hand, those who come to the site only once or twice a year may not intend to explore the site to a great extent. Therefore, they feel the information on signs, bulletin boards and interpretive panels is adequate. Nevertheless, looking into the mean scores of the repeat visitors' perceptions of the signs and the five factors that make signs effective in delivering information, it is clear that these visitors do not think the signs in the New Forest score highly in terms of their communication efficiency.

7.7.3.5 The repeat visitors' frequencies of visiting the New Forest and their perceptions of the television programmes about the New Forest

The research shows findings of visitors who come to the New Forest 6 to 10 times per annum have lower perceptions of the television programmes of the New Forest than visitors who fall into other groups (See Table 7.36).

Table 7. 36: The results of analysis of repeat visitors' frequencies of visiting the New Forest and their perceptions of the televised programmes (symbols *, † and ‡ indicate statistically significant differences between the two corresponding groups).

Television programmes about the New Forest - 202 repeat visitors		
Frequencies of visit per annum (no. and % among the 202 repeat visitors)	Mean	Std. Deviation
More than 10 times per annum - 112 (55.4%)	4.06	.56
6-10 times per annum - 14 (6.9%)	3.79	.58
3-5 times per annum - 28 (13.9%)	4.25	.59
1-2 times per annum - 41 (20.3%)	4.12	.40
Infrequent, less than one visit per annum - 7 (3.5%)	4.14	.38
Factor 1 - User friendliness of the television programmes		
More than 10 times per annum - 112 (55.4%)	4.13	.51
6-10 times per annum - 14 (6.9%) *	3.79	.58
3-5 times per annum - 28 (13.9%) *	4.39	.50
1-2 times per annum - 41 (20.3%)	4.15	.42
Infrequent, less than one visit per annum - 7 (3.5%)	4.14	.38
Factor 2 - Easy understanding information contained in television programmes		
More than 10 times per annum - 112 (55.4%)	4.15	.49
6-10 times per annum - 14 (6.9%) * †	3.79	.58
3-5 times per annum - 28 (13.9%) *	4.39	.50
1-2 times per annum - 41 (20.3%)	4.15	.42
Infrequent, less than one visit per annum - 7 (3.5%) †	4.57	.53
Factor 3 - Lively and dynamic information in television programmes		
More than 10 times per annum - 112 (55.4%) *	4.12	.50
6-10 times per annum - 14 (6.9%) * † ‡	3.71	.61
3-5 times per annum - 28 (13.9%) †	4.25	.59
1-2 times per annum - 41 (20.3%) ‡	4.24	.43
Infrequent, less than one visit per annum - 7 (3.5%)	4.14	.38
Factor 4 - Sufficient information in television programmes		
More than 10 times per annum - 112 (55.4%) *	4.00	.66
6-10 times per annum - 14 (6.9%) * † ‡	3.43	1.02
3-5 times per annum - 28 (13.9%) †	4.11	.63
1-2 times per annum - 41 (20.3%) ‡	4.02	.52
Infrequent, less than one visit per annum - 7 (3.5%)	4.00	.58
Factor 5 - Frequent appearances of the programmes on television		
More than 10 times per annum - 112 (55.4%)	3.66	.92
6-10 times per annum - 14 (6.9%) *	3.07	1.00
3-5 times per annum - 28 (13.9%)	3.46	1.23
1-2 times per annum - 41 (20.3%)	3.46	.95
Infrequent, less than one visit per annum - 7 (3.5%) *	4.43	.79

7.7.4 Visitors' Preferences of Media

As the technology develops, the media used in many tourism destinations to deliver administrative and interpretive information to visitors also evolves towards the end of more sophisticated equipment and instruments such as computers. However, the maintenance costs of such high technology equipment can be high, and having an out-of-order medium at a tourism destination can cause visitors' negative perceptions of the management of the site. Printed materials, signs and personnel still seem to be the major players in delivering information to visitors in many of the tourism destinations.

In tourist information centres, whether it is natural resource based sites such as a national park or a state park, or a historical monument, or an art gallery, printed materials are usually the dominant items displayed and for sale. Audi-visual programmes in the form of videos, CDs and perhaps DVDs tend to be few and far between.

Signage is the often seen on-site medium, and visitors usually rely on printed materials in conjunction with the signs to assist them exploring the site. Live interpretation as well as guided walks and talks are restricted by the very nature of attentive services - human resources are required to conduct such activities, therefore, they cannot be provided constantly and permanently due to limited finances, available time and staff.

Interactive computer programmes are used in some tourism destinations to provide directorial and/or interpretive information to visitors, and some of the programmes are offered in different languages to cater for foreign visitors. However, there is the possibility that some visitors, especially elderly, do not find computer equipment user friendly, because they are not familiar with such forms of media and they may feel intimidated.

Nine different media that are used in many tourism sites worldwide to provide administrative and interpretive information were listed in the questionnaire, and the

sampled visitors were asked to rank these media in order of their preference. These media can be used prior to visitors' arrival and during their visits at the site. These media are:

- Printed materials;
- Interpretive panels along footpaths and cycle tracks, bulletin boards;
- Site personnel, live interpretation, guided activities;
- Exhibitions and displays;
- Audio-visual programmes;
- Directorial signs (road signs);
- Mass media such as television programmes;
- The Internet;
- On-site interactive computerised programmes.

The findings show that the most favoured medium is printed materials, followed by directorial signs. Interpretive panels along walks and tracks and attentive services provided by site personnel such as guided activities and live interpretation are the third and fourth preferred media chosen by the sampled visitors (See Figure 7.10).

This finding suggests visitors' style of exploring a destination. Printed materials provide information of the site, such as its history and present, activities to carry out, attractions/locations to visit, direction, and accommodation. Directorial signs, on the other hand, support the approximated directorial information in the printed material and give visitors prompt, more accurate and updated directions about the site to reduce the likely frustration and fatigue resulting from visitors' unfamiliarity with the area. Such findings also indicate that visitors appreciate interpretive panels, signs and bulletin boards along walks and cycle tracks where visitors undertake their activities. These interpretive signs posted in the area where outdoor activities are undertaken provide visitors with unique, first-hand and vivid experiences - they can see or hear the features surrounding them. Visitors' inexperienced eyes may miss out these features, however, with the help from site personnel in guided activities, visitors can

learn how to look for, observe and distinguish species. Also, site personnel offer visitors the help of responding to their queries until they are satisfied.

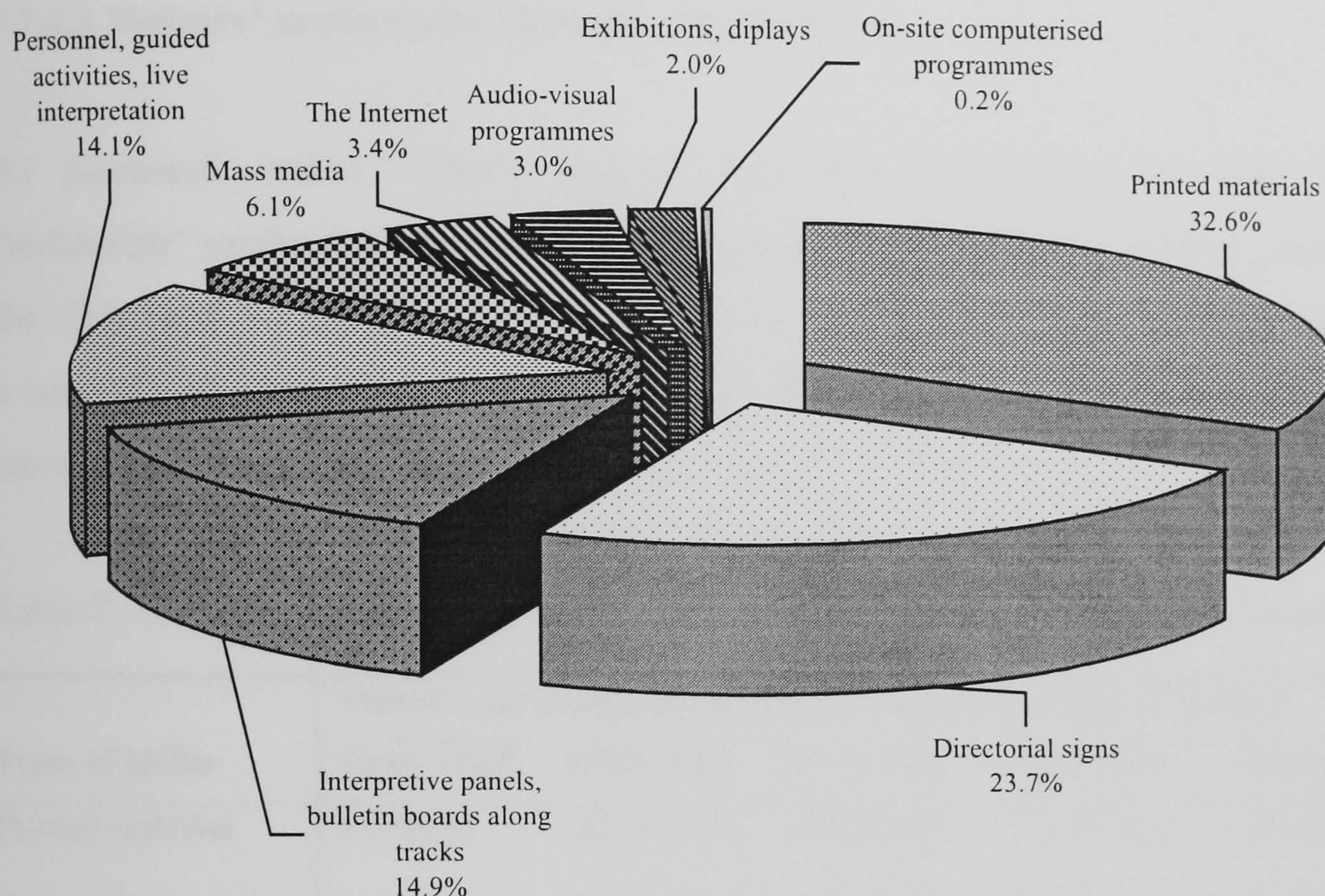


Figure 7. 10: The sampled visitors' preferences of media to be used in a tourism destination.

Referring to the available media in the New Forest when the survey was carried out, the research findings suggest that the managing authorities need to improve the directorial signs, provide more interpretive panels along walks and cycle tracks to interpret site-specific features, and organise guided activities. Considering the size of the New Forest, it would not be practical to organise guided activities throughout the site. The Forestry Commission's data shows that some particular locations, such as Bolderwood and Tall Tree Walks where some form of interpretation already existed, such as interpretive panels and the Deer Sanctuary, and they are major tourist honey-pots. Scheduling guided activities in such locations during peak seasons may be welcome by the visitors. Offering guided walks in campsites can only benefit the campers. There are a large number of excursionists coming to the New Forest

annually, therefore, providing scheduled guided activities in some of the honey-pots to interpret the features to visitors during peak season is likely to enhance visitors' understanding of the New Forest, and visitors' enjoyment can also be enhanced.

7.7.4.1 Visitors' preferences of media and their age

As discussed earlier, elderly visitors may feel intimidated by their deemed "unfamiliar" media such as interactive computerised programmes and the Internet. On the other hand, for people who are between 15 and 40 years old, a computer is almost a necessity in one's life. The results show different patterns of media preferences among the visitors (See Table 7.37).

Table 7. 37: The comparison between visitors' age and their preferences of media.

Types of Media	Visitor's age group (no. of visitors and % of the age sub group)				
	Under 15 (9)	15-25 (170)	26-40 (480)	41-60 (219)	Over 61 (175)
Printed material	9 (100%)	163 (95.9%)	458 (95.4%)	199 (90.9%)	154 (88%)
Interpretive panels along tracks, walks	1 (11.1%)	71 (41.8%)	204 (42.5%)	98 (44.7%)	75 (42.9%)
Site personnel, guided activities	4 (44.4%)	55 (32.4%)	204 (42.5%)	83 (37.9%)	80 (45.7%)
Exhibitions, displays	5 (55.6%)	5 (2.9%)	31 (6.5%)	9 (4.1%)	9 (5.1%)
Audio-visual shows	1 (11.1%)	17 (10%)	39 (8.1%)	18 (8.2%)	15 (8.6%)
Directorial signs	5 (55.6%)	133 (78.2%)	339 (70.6%)	146 (66.7%)	92 (52.6%)
Mass media	2 (22.2%)	16 (9.4%)	54 (11.3%)	42 (19.2%)	69 (39.4%)
The Internet	0	32 (18.8%)	53 (11%)	12 (5.5%)	5 (2.9%)
Interactive computerised programmes	0	0	4 (.8%)	3 (1.4%)	0

Printed materials are still the most favoured medium by visitors in the various age groups, and their second choices are directorial signs. The differences occurred in their third and less favoured media choice. For visitors who are younger than 15 years of

age, exhibitions carry the same weight as directorial signs to be their second choice of media, narrowly followed by site personnel. Visitors who are over 61 years old, state that site personnel are the third choice, followed by interpretive panels along tracks and walks, mass media, audio-visual shows and exhibitions. Visitors who are in the age groups of 15 to 25, 26-40 and 41-60 preferred interpretive panels along tracks and walks as their third favoured choice.

The findings show that computer does not appeal to elderly visitors, but the increasing popularity of the Internet to acquire information from is demonstrated in the above table, which suggests that the site-managing authorities cannot underestimate the power of the Internet. However, printed materials, directorial, administrative and interpretive signs and site personnel are the ever-preferred media regardless the age differences among the visitors. They are likely to maintain their popularity at tourism destinations because they all possess the same advantage - they can be used on-site conveniently to provide prompt answers. Other types of media such as a computer, exhibitions and audio-visual shows, which require infrastructure as well as superstructure to house, operate and maintain the equipment, including a building, electricity and man power. In other words, they cannot be used whilst a visitor is carrying out outdoor activity. The flexibility of printed materials also means that visitors can obtain it prior to their visits to a site, and most of all, they can keep it after their visits as a reminder of their experiences as well as a tool for planning their future visits.

It is necessary to stress that visitors usually rely on a combination of more than one type of media to assist their exploration of a destination. Therefore, the development of technology, including satellite navigation and mobile communication, may one day become highly available to most of the general public. By then the media that are currently heavily dependent upon might play a less significant role in providing information to visitors.

7.8 VISITORS' PERCEPTIONS OF THE CURRENT VISITOR MANAGEMENT STRATEGIES PRACTISED IN THE NEW FOREST

Referring to Chapter Two, visitor management covers a wide range of techniques, varying from providing on-site transportation, applying regulations, penalties and restrictions, zoning, resource hardening and alteration, to landscaping, marketing and providing information and interpretation to visitors (Cooper et al, 1998; Grant, 1994; Orams, 1996). At present the visitor management strategies implemented in the New Forest are carried out mainly by two organisations - the Forest Commission and the New Forest District Council.

The techniques used to manage visitor activities include the application of restrictions on entrances to timber inclosures during harvest seasons, the provision of information and interpretation, resource hardening such as gravel paved walks and cycle routes, and resource alteration such as tree felling in campsites to ensure visitor safety and the construction of the Deer Sanctuary. Using the physical constraints such as the capacity of car parks and the locations of these car parks to direct visitor flow are also implemented in the New Forest. Activities such as walking and cycling are promoted by the New Forest managing agencies. Moreover, the New Forest is strongly marketed as an ideal destination to carry out recreational activities such as walking, cycling and horse riding that are healthy oriented and are believed to have less impact on the natural environment in the site if managed appropriately. Visitor codes are used widely to encourage visitors to carry out activities in an appropriate and environmentally friendly manner, such as staying on walks and cycle routes, no littering, no lighting fire and controlling pets, especially dogs, in the open forest.

7.8.1 Sampled Visitors' Perceptions of the Quality of the Current Visitor Management Strategies in the New Forest

Among the currently used visitor management techniques, some are related to the management and administration of the resources, such as tree felling, locations of the

car parks and the capacity of the road network. In terms of providing information and interpretation to visitors, which is categorised as soft visitor management strategies by Orams (1996), it has been claimed by many researchers to have the ability to modify visitors' inappropriate behaviour and activities in order to make them more environmentally friendly (Beckmann, 1988; Cooper, 1991; Curthoys, 1998; Ham, 1983, 1992; Knudson et al, 1995; Lane, 1991; McArthur, 1994; McArthur and Hall, 1996c; Moscardo, 1996, 1998, 1999; Moscardo et al, 1998; Orams, 1996). The researcher explored whether or not the visitors perceived the present provision of information and interpretation is sufficient in terms of its contents and delivery. Eight issues were identified in the survey questionnaire to explore visitors' perceptions:

- Issue 1: introduction of more regulations on tourism activities;
- Issue 2: improvement of information contents in printed materials;
- Issue 3: improvement of information contents on interpretive signs and bulletin boards;
- Issue 4: introduction of more varieties of media to deliver information;
- Issue 5: improvement of indoor exhibitions in the New Forest Museum;
- Issue 6: improvement of directorial information for walks, cycle routes, facilities and attractions;
- Issue 7: provision of information about the New Forest environmental issues;
- Issue 8: provision of information of appropriate activities to participate in.

Below is the figure of the total responded visitors' perceptions of whether or not they considered those issues require improvement (See Figure 7.11).

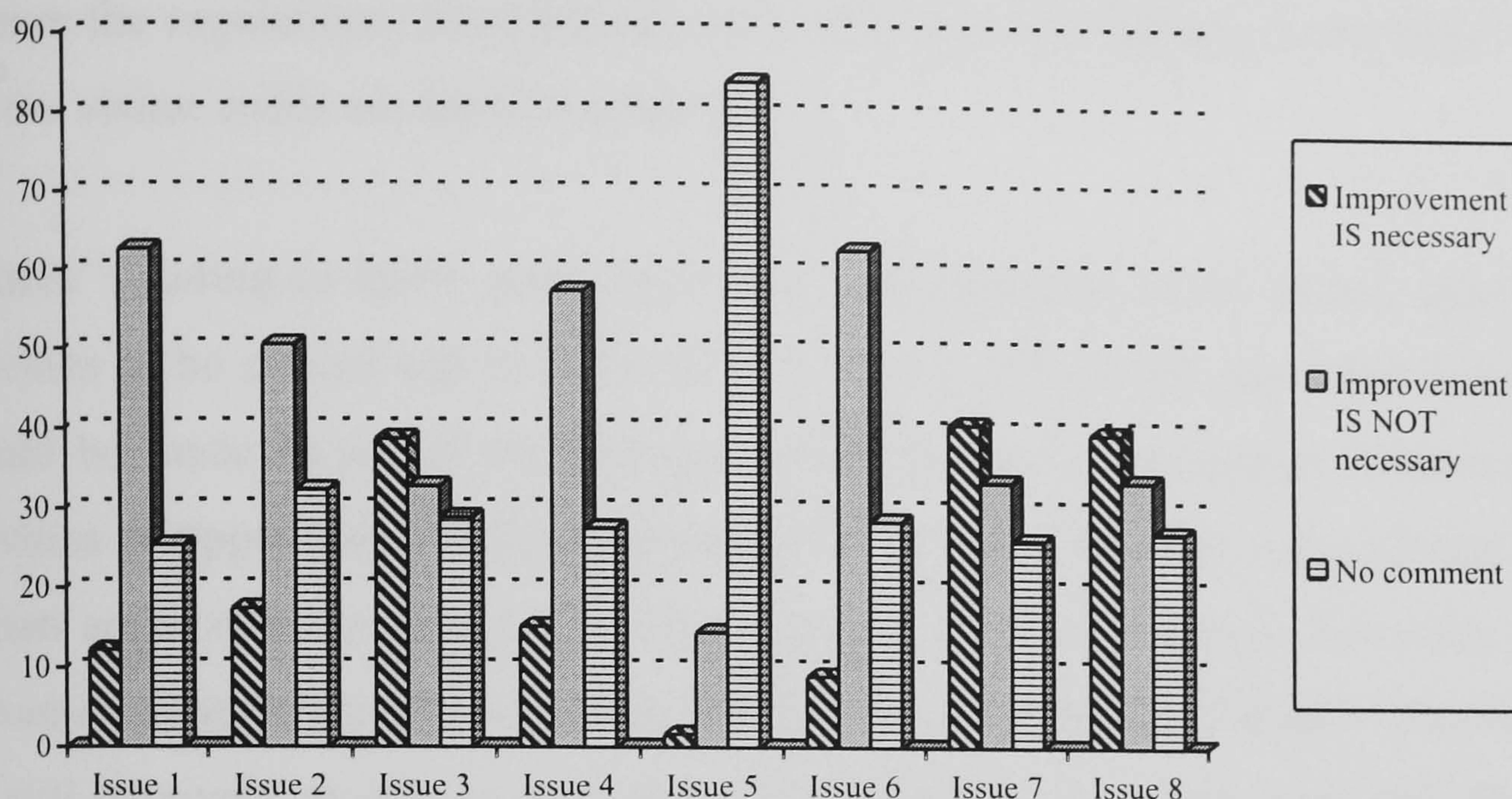


Figure 7. 11: The visitors' perceptions of whether these issues should be improved.

The above figure clearly shows that the visitors that responded considered the interpretive signs, panels and bulletin boards, information related to the environmental issues about the New Forest, and information of appropriate activities to carry out need to be improved. This suggests that visitors welcome the provision of information during their participation in activities, and they are interested in knowing more about the resource sensitivity of the New Forest.

Bulletin boards are placed in large car parks where the visitor volume is large and there are walks, picnic area and cycle routes nearby. Interpretive panels are seen in the Deer Sanctuary in Bolderwood, and in Tall Tree Walks where a diverse species of trees are planted in the inclosure. In short, interpretive signs are not a common feature in the New Forest. Moreover, except for the visitor codes, information of environmental issues, and what activities are encouraged to carry out is scarce. Referring to the concept of visitor management, the provision of information about the destination is to counter visitors' negative feelings and dissatisfactions resulted from the application of restrictions (Cooper et al, 1998; McArthur, 1994). In other words, restrictions upon certain activities and the reasons for applying such restrictions should be used simultaneously, as these two management methods support each other to

ensure that visitors understand and appreciate the management effort, and they also observe the regulations. Nonetheless, such information is lacking in the New Forest, and the visitor codes are not law-enforced.

Visitors' wanting to know more about the environmental issues of and appropriate activities to be carried out in the New Forest also reflects the argument that tourist should be made aware of the impacts resulting from inappropriate behaviour and activities (Krippendorf, 1987). Krippendorf (1987, p. 138) also suggests that "most tourists are unsure consumers. They have many wishes and longings, but rarely a clear picture of what they really want and can therefore be easily influenced. The majority are still passively receptive, open and willing consumers, ready to be led. They are grateful for help, advice and concrete offers, indeed, they rely on them". Hence, making the New Forest visitors more aware of the resource importance and sensitivity of the site, such information should be provided to them in order to advise them how to enjoy but not destroy the New Forest.

Interestingly, as many as 80% of the visitors that responded did not feel that the use of more varieties of media to deliver information was necessary. During the survey process, the media employed included signs, bulletin boards, various written materials, Tourist Information Centres, audio-visual programmes and exhibitions in the New Forest Museum, and personnel. The researcher expected some visitors would support the use of more high-technology medium such as computer touch screen. However, the findings indicate that the sampled visitors consider the current state and variety of media is sufficient.

7.8.2 The Different Perceptions of the Current Visitor Management Strategies between First-time and Repeat Visitors

The analysis show that first-time and repeat visitors had different perceptions with respect to Issues 2 and 3 - the improvement of printed media and improvement of information on interpretive signs and bulletin boards. Over one-third of the first-time

visitors who responded to this question thought the printed media needed further improvement, whilst less than a quarter of the responded repeat visitors thought improvement was necessary. The finding suggests that the repeat visitors' familiarity with the site helps to reduce their dependence on printed materials. On the other hand, higher proportion of the first-time visitors felt insufficiency in the information contents in the written material. This is likely to be a result of their unfamiliarity of the area. It is also possible that these first-time visitors were accustomed to information contents available from elsewhere and found the New Forest materials to be lacking.

Similarly, over two-thirds of the first-time visitors considered the information on interpretive signs and bulletin boards should be improved, and half of the repeat visitors had the same thoughts. The lower percentage of the repeat visitors can be explained by their familiarity with the site. To the visitors who had been to the New Forest many times before, their dependence on the interpretive signs is not as much as of those first-time visitors. When a visitor first comes to the New Forest, using all available media to collect information related to the site is crucial for them to travel around the site and to enjoy themselves. Thus, not only would they expect the signs and bulletin boards to provide them with the information they needed, they may also be more critical about the quantity and quality of the information presented in the signs and bulletin boards. Nevertheless, the results show that a high proportion of visitors from both groups considered it necessary to improve the information contents in interpretive signs and bulletin boards (See Table 7.38).

Table 7. 38: The percentage of first-time and repeat visitors' perceptions of the importance of improving the following issues (*italic indicate Chi-square tests show NO statistical significant difference between the two groups of visitors*).

Issues	Visitor category	Improvement on this issue IS necessary (no. of responded visitors)
<i>Issue 1: introduction of more regulations on tourism activities</i>	First-time visitors	17.2% (122)
	Repeat visitors	16.1% (665)
Issue 2: improvement of information contents in printed materials	First-time visitors	37.1% (124)
	Repeat visitors	23.2% (590)
Issue 3: improvement of information contents on interpretive signs and bulletin boards	First-time visitors	68.8% (112)
	Repeat visitors	51.6% (638)
<i>Issue 4: introduction of more varieties of media to delivery information</i>	First-time visitors	18% (122)
	Repeat visitors	21.5% (641)
<i>Issue 5: improvement of indoor exhibitions in the New Forest Museum</i>	First-time visitors	20% (15)
	Repeat visitors	9.6% (156)
<i>Issue 6: improvement on directorial information for walks, cycle routes, facilities and attractions</i>	First-time visitors	12.4% (113)
	Repeat visitors	12.6% (641)
<i>Issue 7: provision of information about the New Forest environmental issues</i>	First-time visitors	48.8% (121)
	Repeat visitors	55.9% (658)
<i>Issue 8: provision of information of appropriate activities to participate in</i>	First-time visitors	47.9% (119)
	Repeat visitors	55.2% (650)
Number of first-time visitors - 309		
Number of repeat visitors - 744		

7.8.2.1 The influences of repeat visitors' frequencies of visiting the site on their perceptions of the current interpretation in the New Forest

Among the repeat visitors, the frequencies of visit the New Forest to a certain extent have influences on their opinions on whether these issues should be improved (See Table 7.39).

Table 7. 39: The percentage of repeat visitors' frequencies of visit to the site and their perceptions of the importance of improving the following issues (*italic indicate Chi-square test show NO statistically significant difference*).

Issues	Repeat visitors' frequencies of visit the New Forest in a year	% of the responded visitors who consider improvement on this issue IS necessary (no. of responded visitors)
Issue 1: introduction of more regulations on tourism activities	More than 10 times	24.9% (169)
	6-10 times	20.3% (64)
	3-5 times	20% (90)
	1-2 times	14.5% (173)
	Less than once in a year	5.3% (169)
<i>Issue 2: improvement of information contents in printed materials</i>	More than 10 times	23.4% (137)
	6-10 times	24.6% (57)
	3-5 times	15.5% (84)
	1-2 times	22.1% (154)
	Less than once in a year	27.8% (158)
Issue 3: improvement of information contents on interpretive signs and bulletin boards	More than 10 times	39% (159)
	6-10 times	68.3% (63)
	3-5 times	46.8% (94)
	1-2 times	53.7% (164)
	Less than once in a year	58.2% (158)
Issue 4: employment of more varieties of media to delivery information	More than 10 times	16% (162)
	6-10 times	25.8% (62)
	3-5 times	23.4% (94)
	1-2 times	31.5% (165)
	Less than once in a year	13.9% (158)
<i>Issue 5: improvement of indoor exhibitions in the New Forest Museum</i>	More than 10 times	3.4% (58)
	6-10 times	22.2% (9)
	3-5 times	23.5% (17)
	1-2 times	10% (30)
	Less than once in a year	9.5% (42)
<i>Issue 6: improvement on directorial information for walks, cycle routes, facilities and attractions</i>	More than 10 times	14.6% (164)
	6-10 times	7.7% (65)
	3-5 times	13.8% (94)
	1-2 times	11.5% (165)
	Less than once in a year	13.1% (153)
Issue 7: improvement of information about the New Forest environmental issues	More than 10 times	52.1% (169)
	6-10 times	67.2% (67)
	3-5 times	52.7% (93)
	1-2 times	48.5% (171)
	Less than once in a year	65.2% (158)
<i>Issue 8: improvement of information of appropriate activities to participate in</i>	More than 10 times	52.1% (169)
	6-10 times	56.7% (67)
	3-5 times	51.8% (85)
	1-2 times	51.5% (171)
	Less than once in a year	63.9% (158)

Total number of repeat visitors - 744, of which,

- more than 10 times in a year - 169
- between 6 and 10 times in a year - 69
- between 3 and 5 time in a year - 99
- between 1 and 2 times in a year 204
- less than once in a year - 203

Most of the respondents did not think it would be necessary to introduce more regulations and restrictions to activities, and among the repeat visitors - less than one-fifth of them felt that more regulations should be introduced. The results show an interesting distribution in terms of their frequencies of visit the site and their positive attitudes towards the introductions of more regulations. The analysis shows statistically significant differences in the repeat visitors' frequencies of visit and their opinions on the issue of introducing more regulations to manage the visitor activities. The findings show an increase in the support for the introduction of more regulations in accordance with the frequency of visit the site - the proportion of the repeat visitors who visit the site more than 10 times in a year and felt the introduction of more regulations is necessary is higher than those who come to the New Forest less than once in a year.

This indicates that visitors who come to the New Forest more often may have seen incidents of visitors' inappropriate activities and the resulted outcome, hence they felt harsher regulations might be needed in order to reduce such situations. Inappropriate activities include animal feeding, speeding and the improper use of fire. The outcomes of these activities are the altered wildlife habits such as ponies approaching visitors to ask for food and may become aggressive when their demand is not fulfilled. Moreover, these regular visitors might feel that the quality of the natural environment and the peaceful atmosphere of the New Forest have declined over the period of time - noticeably the increased traffic and visitor volume, and therefore they thought the use of more regulations and restrictions are likely to improve the quality of the New Forest environment. It might also be the case that those who come to the New Forest more frequently are, by their nature, more environmentally conscious than those who do not).

Furthermore, the results identified statistically significant differences in the relationship between the responded repeat visitors' frequencies of visiting the New Forest and their opinions about improving the information contents of the interpretive signs and bulletin boards. In general, those who visit the site less frequently showed

higher a proportion who considered the improvement of the information contents of interpretive signs and bulletin boards necessary.

7.8.3 The Different Perceptions of the Current Visitor Management Strategies between Staying Visitors and Excursionists

Splitting the sampled visitors into excursionists and staying visitors, the results show statistically significant differences between these two groups in four issues - improvement of information contents on interpretive signs and bulletin boards, improvement of directorial information for walks, cycle routes and attractions, improvement of the New Forest environmental issues, and improvement of information of appropriate activities to participate in. The proportion of staying visitors who felt that the information contents of the interpretive signs and bulletin boards should be improved was higher than of those excursionists. Furthermore, higher percentage of the staying visitors thought the directorial information for walks, cycle routes and attraction could be improved.

These findings suggest that because staying visitors spend longer periods of time in the New Forest, they have more time and opportunity to carry out a variety of activities. Hence, their demands for interpretive and directorial information are more than of those excursionists. Also, they may be likely to be interested in more diverse interpretive information, and they found the currently available ones needed to be improved in terms of contents and quantity.

The results show a higher proportion of the staying visitors found the information relating to the environmental issues of the site and the information of appropriate activities that can be carried out to be insufficient. Since staying visitors have more time and opportunity to engage in various activities, they are more likely to explore the New Forest in more detail. Regulations and visitor codes which advise visitors what “not” to do are short of the positive messages that encouraging visitors to participate in certain activities. The findings already indicate that the introduction of

more regulations and restrictions is not approved by many of the sampled visitors. Thus, despite the necessity of applying regulations and restrictions to control and manage the resources and visitors, using an approach that tells visitors what TO DO may be more acceptable to the visitors. Referring to the operant conditioning, punishment although is able to suppress the occurrence of unwanted behaviour, the effects are likely to be short-lived (Hergenhahn, 1982; Skinner, 1971). Applying this concept to the visitor management in the New Forest, instead of telling visitors what activities not to do and what regulations to obey, giving visitors information of what activities they are encouraged to carry out and how they are expected to undertake those activities may be more effective in reducing negative impacts resulting from inappropriate visitor activities.

The figure below shows the opinions of the excursionists and staying visitors with respect to the eight issues relating to the current visitor management and information provision in the New Forest (See Figure 7.12).



Figure 7. 12: The percentage of the staying visitors and the excursionists' who considered the improvement on each of the issues necessary.

7.9 IS PROVIDING INFORMATION OF A SITE CONSIDERED NECESSARY BY THE VISITORS?

The results show that nearly all of the sampled visitors considered the provision of information to visitors important and necessary (See Figure 7.13). The findings show no statistical difference between first-time and repeat visitors' perceptions of the importance of information provision - the majority of the visitors in these two groups considered the provision of information about the site either necessary or very necessary.

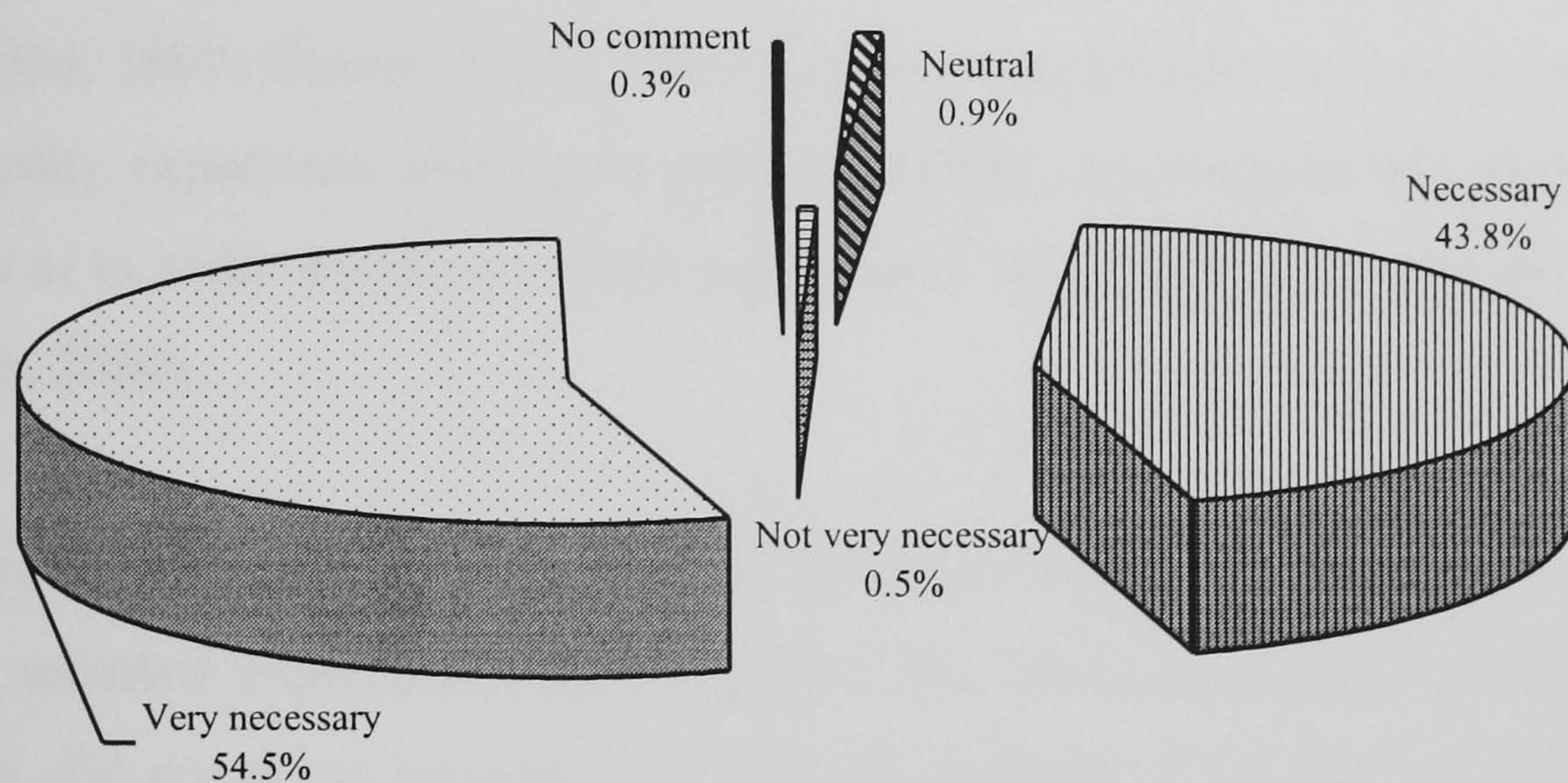


Figure 7. 13: The sampled visitors' perceptions of the importance of providing visitors with information in a tourism destination.

Directorial information certainly is essential for visitors to come to and go around in a destination because it helps reduce their frustration resulting from their unfamiliarity with the site. Management and site-administration related information such as restriction, regulations, and opening hours of attractions provides an insight into the site managing agencies' work on managing, protecting and conserving a site while offering visitors with satisfied experiences at the site. Moreover, even though visitors may not look for interpretive information intentionally, it can help to enhance visitors' experiences and knowledge of the area. Visitors might treat interpretive information as a bonus that increases their understandings of the features they come to visit and

enjoy. Since visitors in general highly welcome the provision of information, referring to Krippendorf's (1987) suggestion that tourists are receptive and willing to receive advice, much of the administrative, interpretive and educational functions of information provision can be fulfilled when it is designed and delivered effectively.

7.10 THE RELATIONSHIP BETWEEN VISITORS' SATISFACTION AND WILLINGNESS TO PAY FOR CAR PARKING IN THE NEW FOREST

Researchers have long believed that tourism development is able to be a source of financial income to assist the management of the tourism destination by charging or encouraging donations from visitors for their use of the resources (Lindberg and McKercher, 1997; Orams, 1996). There are also suggestions that visitors who enjoy a high quality experience associated with the natural environment are more willing to pay fees or to make donations which can be used to manage the resources (Dwyer and Edwards, 2000).

The results show that the majority of the visitors to the New Forest had either satisfied or very satisfied experiences (See Figure 7.14). Those who did not respond to this question, did not do so because they had not yet been at the site for long enough to explore the area and carry out activities when they were interviewed.

The findings clearly indicate that most of the visitors had enjoyable experiences in the New Forest. The very few visitors who felt their enjoyment had been let down by the poor weather conditions during their visits - they had little activities to undertake and it was difficult for them to explore the site in the rain.

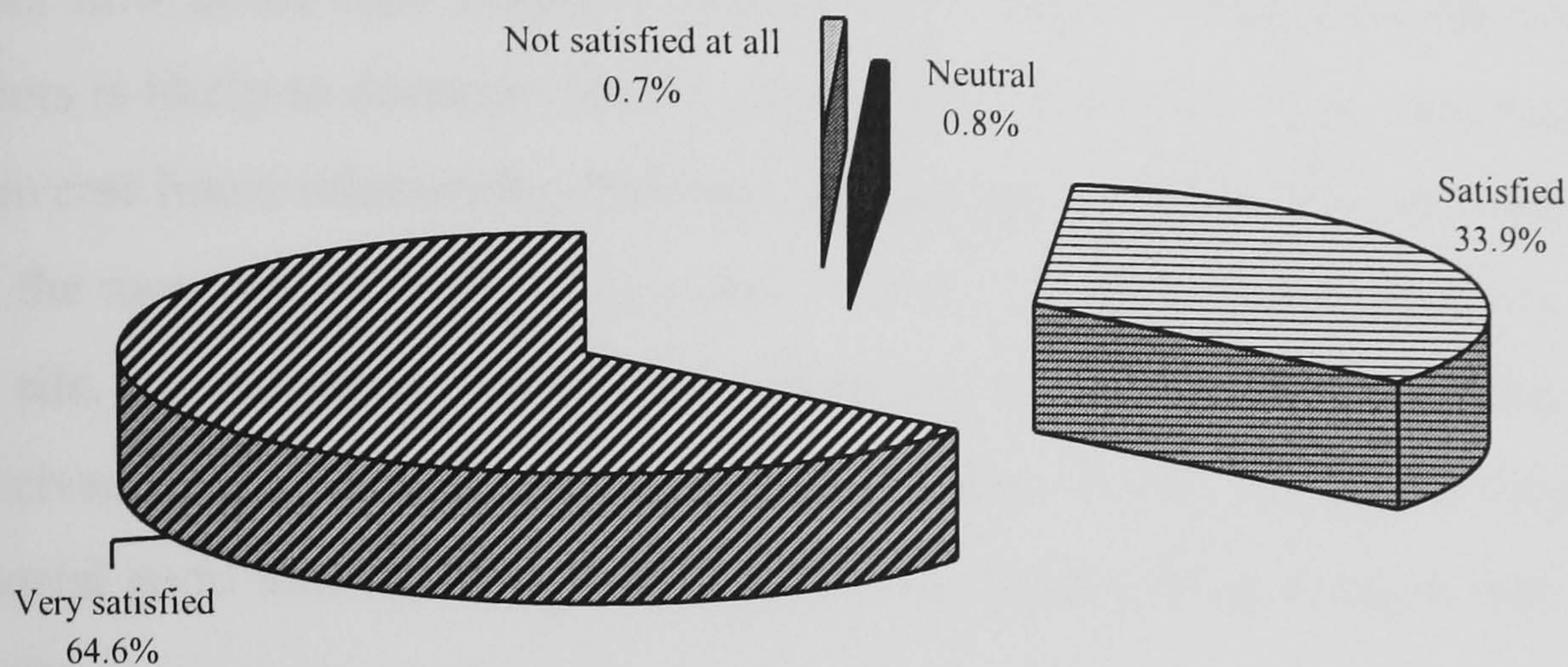


Figure 7. 14: The percentage of the responded visitors' overall experiences of visit the New Forest (886 responded visitors, 84.1% of the total samples).

7.10.1 The Notion of Public Provision for Social Goods and Market Failure

Natural resources such as parks, forests, beaches, mountains are national assets, and often are categorised as social or public goods. In other words, the market fails to function properly because of the facts that social goods are often subject to non-rival consumption and/or non-excludability. For example, to a sandwich, which is a private good, the principle of exclusion applies as A's consumption of the sandwich is made contingent on their paying for it, whilst B who does not pay is excluded. Also, once A has consumed the sandwich it is no longer available for B to consume (a private good). That is, the principle of "users pay". In such situation, in theory, the market functions as an auction system where the consumers bid for a product, hence their preferences for such product are revealed to the producer. Under the pressures of competition, the producer is led by the indications revealed by the consumers to produce the goods that the consumer wants.

However, exclusion is inapplicable in social goods because their consumption is often non-rival (Musgrave and Musgrave, 1989). For instance, A's going to the New Forest does not exclude other people from going there. Moreover, A's enjoyable experiences might not reduce other people's enjoyment of the site - subject to other visitors'

perception of crowding and their expectation. But during summer weekends, when the visitor flow in the New Forest is busy and the traffic is congested, the arrival of more visitors is likely to decrease other's experiences of the site. Thus, one may say there is an inverse linear relationship between the volume of visitor flow and their enjoyment, that the more the visitors the less they may enjoy due to their perceived crowding of the site. Nevertheless, unless the visitor flow reaches the threshold of visitors' perceived unacceptable crowding, the New Forest can be considered in the same way as social good that one visitor cannot exclude another from coming and experiencing the site.

The concept of non-rival consumption of social goods is based on the fact that the benefits derived from consuming a particular good are available to all and without mutual interference (Musgrave and Musgrave, 1989). However, as mentioned earlier, when the perceived threshold of crowding is reached, visitors' use of a tourism destination interferes with one another and the benefits they expected to receive, for example, relaxation, peace and quiet atmosphere and participation in activities, are likely to decrease in accordance with the increasing volume of visitor flows. During the survey, some of the New Forest District local residents expressed their dismay on the volume of visitor flows in peak months. Moreover, in summer time some surveyed visitors also complained about the crowding of the New Forest and the difficulties they experienced when they tried to drive through the villages in the site.

In economic terms, social goods are usually non-rival and non-excludable. It is unlikely to exclude someone from accessing and using public assets such as national parks, forests, beaches, streets, roads and motorways, even though exclusion could be applied. The sale of the available space to the one who values the space the most and who is willing to offer the highest price for it is rival and exclusive in nature, however, it is often difficult to apply such exclusion on social goods. For instance, charging entrance fees for the New Forest is not practical because firstly, there are too many roads leading to the New Forest District and New Forest Heritage Area. Furthermore, the New Forest District and New Forest Heritage Area share the same road network.

And the New Forest is a working Forest, with commercial activities such as timber production and farming on going throughout the year. These factors contribute to the difficulties for the application of market system of auctioning off the supplies to the individuals who are willing to pay for the use of the New Forest.

Moreover, if partaking in consumption is not made subject to payment, people are not forced to reveal their preferences in bidding for social goods, at least this is the case if the number of participants is not very large. As the level of provision of such social good will not be affected by the any one person, individual consumers are likely to be free riders in the provision made by others. When all the consumers act in such a manner, there is no effective demand for the social good, hence the auction system of the market breaks down and leads to market failure (Musgrave and Musgrave, 1989). In the case of the New Forest, the level of provision at the site is not affected significantly by any one New Forest visitor, and they are not made to pay for their uses of the site. In other words, the absence of exclusion of the New Forest makes charging for entrance to the New Forest difficult, even though one may suggest that charging visitors for using the New Forest resource would be a management approach in terms of controlling visitor numbers, traffic flows and applying the principle of “users pay”.

There is no entrance fees or car park charges applicable in the New Forest at present. Charging for entrance fees can be difficult because the road networks are extensively connected with motorways and other regional carriageways. This makes the New Forest easily accessible via these road networks but difficult for the managing authorities to charge entrance fees. Furthermore, the New Forest, same as other national parks in the UK, such as the Snowdonia and the Lake District, might be considered to be a public asset that the public should be allowed to enjoy and access through. In such sense, charging for entrances is likely to cause public protest. However, car park charges are more likely to be agreed based on the perception of “users pay”. Car parks in the Crown Lands of the New Forest can be seen as private goods because the available space in a particular car park is rival and exclusive in

nature. In other words, the auction system of market can be applied. “Pay and display” is practised in the cities, towns, villages, shopping centres and hospitals in the UK. People may not like it, but in general they will pay for parking. Hence, the “pay and display” scheme may be applied in the Crown Lands of the New Forest to generate income for the Forestry Commission.

Currently, there are approximately 130 car parks in the Crown Lands, varying in sizes and available facilities. These car parks are free of charge, although donation boxes are placed in them and the uses of the collected monetary are explained in attached signs (help the management of the New Forest). Applying the idea of hypothetical user charges (Musgrave and Musgrave, 1989), the sampled visitors were asked whether they would be willing to pay for car parks in the Crown Lands of the New Forest, and how much of the charges they consider as acceptable and appropriate. Such hypothetical research questions were asked based on the conditions that the charges will be of day-ticket transferable scheme and the financial gain would be used for resource management and protection. Such conditions were presumed because it would be impractical to charge individual car parks in the Crown Lands. Also, the uses of the money generated from the car park charges in the protection of the New Forest resources were believed to be an incentive to encourage visitors’ willingness to pay for car parking.

7.10.2 Sampled Visitors’ Acceptance of Hypothetical Car Park Charges

Nearly three quarters of the total sampled visitors claimed that they would be willing to pay for car parking, providing the financial gain is to be used for resource management and protection, and that their car park ticket is transferable between the car parks in the Crown Lands of the New Forest (See Figure 7.15).

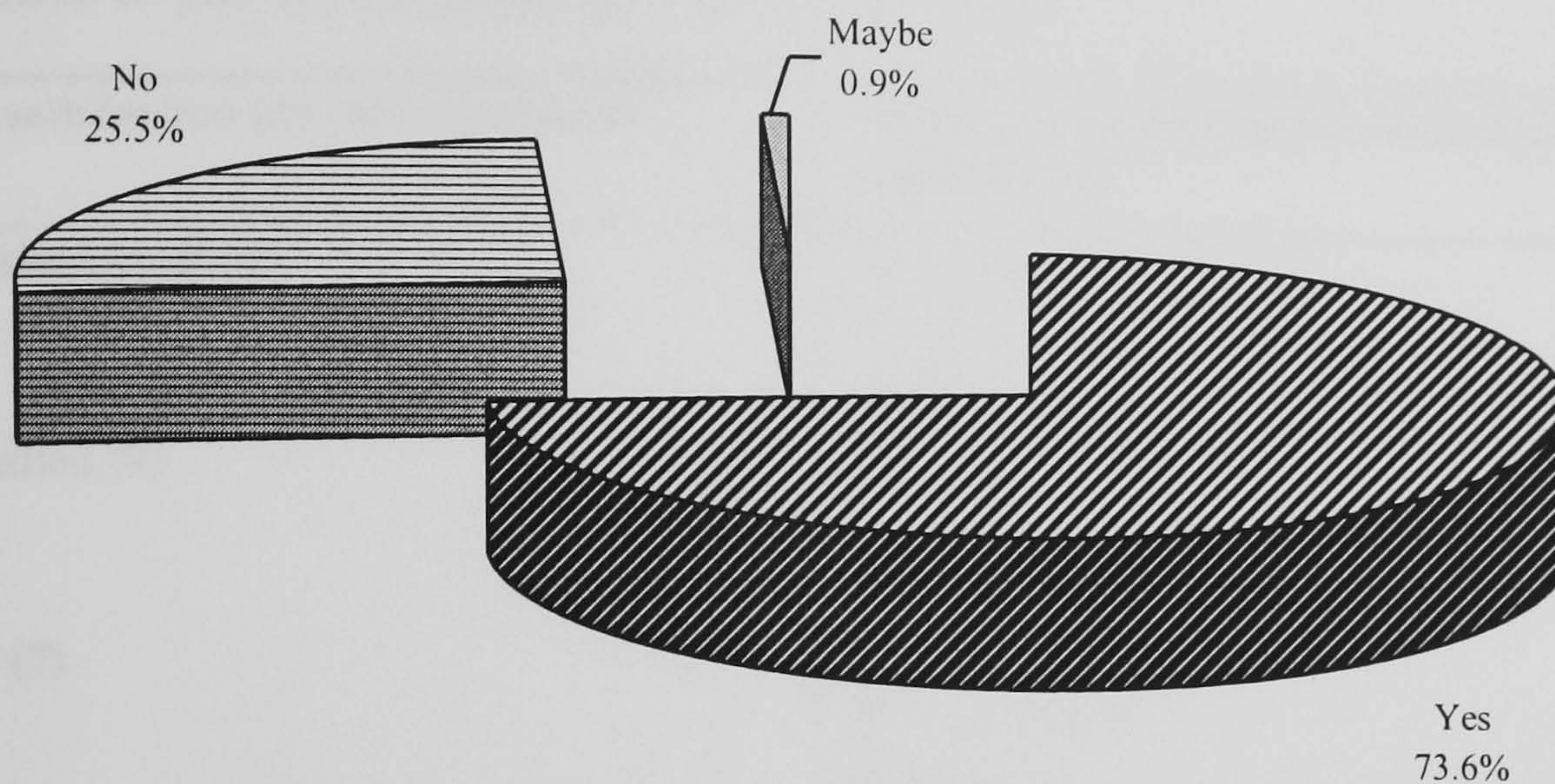


Figure 7. 15: Pie chart of the percentage of the total visitors' willingness to pay for car parking in the New Forest if the financial gain is to be used for resource protection.

7.10.2.1 The relationship between visitors' satisfaction of visit and their willingness to pay for hypothetical car park charges

The results show significant differences in the relationship between New Forest visitors' satisfaction of their visit to the site and their willingness of paying for car parking. Overall, visitors to the New Forest are willing to pay for car parking. Strangely, the analysis shows an interesting relationship between visitors' willingness to pay for car parking and their level of visit satisfaction - those who had very satisfying experiences were less willing to pay for car parking than those whose experiences were less enjoyable. Six of the visitors who responded that their experiences of visiting the New Forest had been very unsatisfied also claimed that they would be willing to pay for car parking (See Table 7.40). This finding does not support the suggestions that the more enjoyable visitors' experiences in a tourist destination the more willing to pay for their uses of the resources. However, given that these views were only expressed by 6 of the 1053 sample it is not possible to make any reliable conclusion from this analysis.

Table 7. 40: The relationship between New Forest visitors' satisfaction and willingness to pay for car parking in the New Forest.

Overall satisfaction (no. of respondents)	Willingness of paying for car parking (no. of respondents)
Not satisfied at all (6)	Yes – 100% (6) No – 0 Maybe – 0
Not satisfied (0)	Yes – 0 No – 0 Maybe – 0
Neutral (7)	Yes – 85.7% (6) No – 14.3% (1) Maybe – 0
Satisfied (300)	Yes – 72.7% (218) No – 25.3% (76) Maybe – 2% (6)
Very satisfied (573)	Yes – 69.8% (400) No – 29.7% (170) Maybe - .5% (3)
Experience of visit not applicable (167)	Yes – 86.2% (144) No – 13.2% (22) Maybe - .6% (1)

Nonetheless, it is necessary to explore further in visitors' categories, excursionists and staying visitors, as well as the geographical origins of their residences, prior to disagreeing with the suggestions made by other researchers. Enjoyable experience is just one of the several factors that have influences on a visitors' willingness to pay for their uses of car parks. Other factors are believed to be able to influence visitors' willingness to pay for car parking. Moreover, these factors may be likely to affect visitors' deemed acceptable car park charges.

7.10.3 The Differences between Staying Visitors/Excursionists and their Willingness to Pay for Hypothetical Car Park Charges

Among the total visitors who would be willing to pay for car parking in the New Forest, there is a statistically significant difference between the excursionists and the staying visitors' willingness to pay for car parking - the proportion of the staying visitors was higher than the proportion of excursionists (See Figure 7.16). This

suggests that staying visitors' allowances of expenditures may be higher than of those excursionists, hence they are more willing to pay for car parking. Furthermore, because staying visitors' uses of the New Forest resources are expected to be for longer period of time, the notion of "users pay is more likely to influence their willingness to pay for car parking. Therefore, car park charges had greater appeal among the staying visitors.

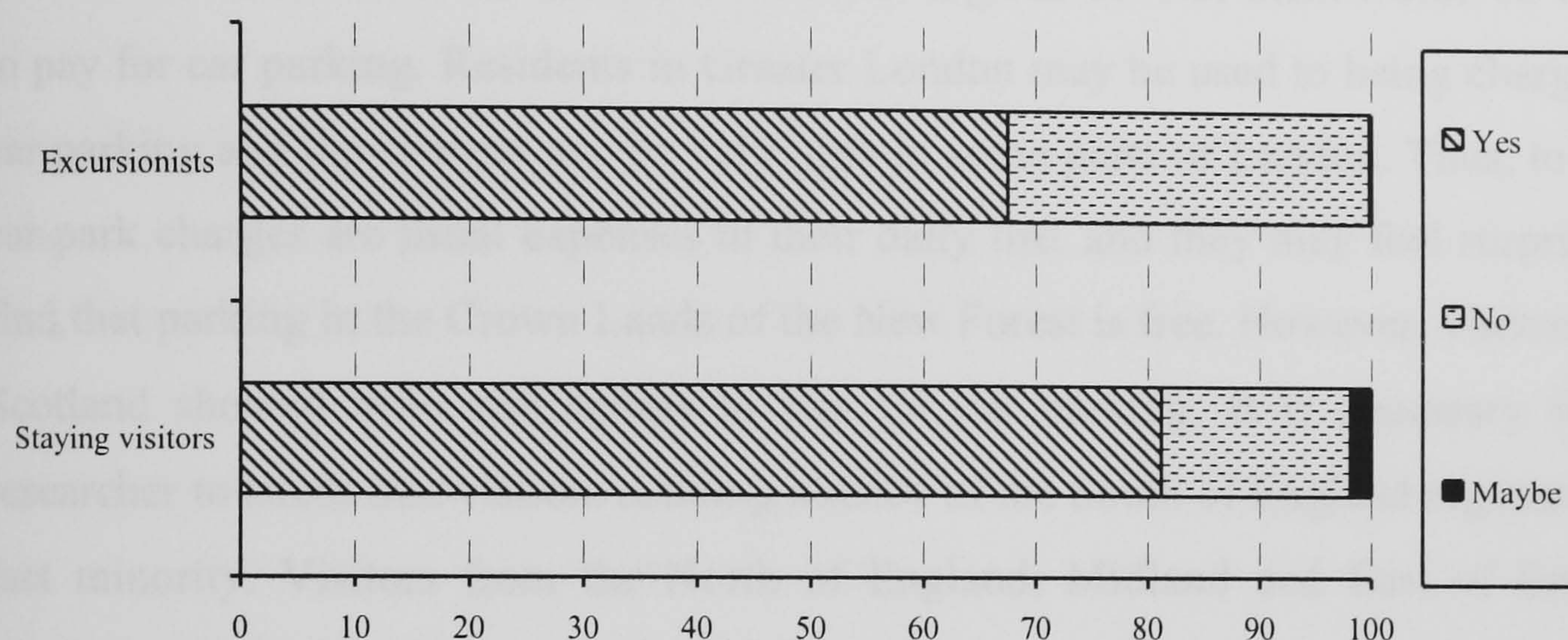


Figure 7. 16: The percentage of excursionists and staying visitors' willingness to pay for car park in the New Forest (excursionists - 591, staying visitors - 462).

7.10.4 The Differences between Visitors' Geographical Origins of their Residences and Their Willingness to Pay for Hypothetical Car Park Charges

It is worth further investigating the sampled visitors' geographical origins of their residences and their ideal car park charges in the form of day-ticket scheme.

Looking into the sampled visitors' geographical residence, the findings show significant differences in the visitors' geographical origins of residences and their willingness to pay for car parking in the New Forest. The finding shows that more than three quarters of the residents from the New Forest District would not be willing to pay for car parking in the New Forest Crown Lands. They feel that the council tax they pay to the District Council includes the privilege of one-car-per-household free-parking in the villages and towns in the New Forest, and the tax is of high rate.

Moreover, the New Forest is always free parking. Since they have already contributed financially in the form of council tax, therefore, they see no reason why they should pay for car parking in the Crown Lands (See Table 7.41).

The results show that residents in the East Midlands, South East of England, Greater London and Wales, as well as international visitors, recorded a high proportion of people who were willing to pay for car parking in the New Forest. This is especially the case for residents from Greater London, as high as 89% of them would be willing to pay for car parking. Residents in Greater London may be used to being charged for car parking and the charges can be very high in some parts of London. Thus, to them, car park charges are usual expenses in their daily life, and they may feel surprised to find that parking in the Crown Lands of the New Forest is free. However, visitors from Scotland showed little willingness to pay for car parking. It is necessary for the researcher to stress that visitors residing outside of the South of England regions are in fact minority. Visitors from the North of England, Midland and East of England, Scotland, Wales and international visitors only accounted just under 18% of the total sampled visitors.

Table 7. 41: Visitors' geographical origins of residences and their willingness to pay for car parking in the Crown Lands of the New Forest.

Region (no. visitors)	% of visitors willing to pay for car parking (no. of visitors)
North East of England (7)	Yes - 100% (7) No - 0 Maybe - 0
North West of England (18)	Yes - 100% (18) No - 0 Maybe - 0
Yorkshire and Humber (23)	Yes - 65.2% (15) No - 34.8% (8) Maybe - 0
West Midland (33)	Yes - 69.7% (23) No - 30.3% (10) Maybe - 0
East Midland (31)	Yes - 87.1% (27) No - 12.9% (4) Maybe - 0
East of England (50)	Yes - 62% (31) No - 36% (18) Maybe - 2% (1)
South West of England (212)	Yes - 67.9% (144) No - 31.6% (67) Maybe - .5% (1)
South East of England (exc. Greater London and New Forest District locals) (377)	Yes - 75.6% (285) No - 22.8% (86) Maybe - 1.6% (6)
Greater London (212)	Yes - 89.2% (189) No - 10.4% (22) Maybe - .5% (1)
New Forest District Local (63)	Yes - 27% (17) No - 71.4% (45) Maybe - 1.6% (1)
Scotland (7)	Yes - 28.6% (2) No - 71.4% (5) Maybe - 0
Wales (8)	Yes - 87.5% (7) No - 12.5% (1) Maybe - 0
International visitors (12)	Yes - 75% (9) No - 25% (3) Maybe - 0

7.10.5 The Differences between First-time/Repeat Visitors and their Willingness to Pay for Hypothetical Car Park Charges

The results also show significant differences between the first-time and repeat visitors' willingness to pay for car parking. The proportion of the first-time visitors to the New Forest who claimed that they would be willing to be charged for car parking is higher than of those repeat visitors (See Figure 7.17).

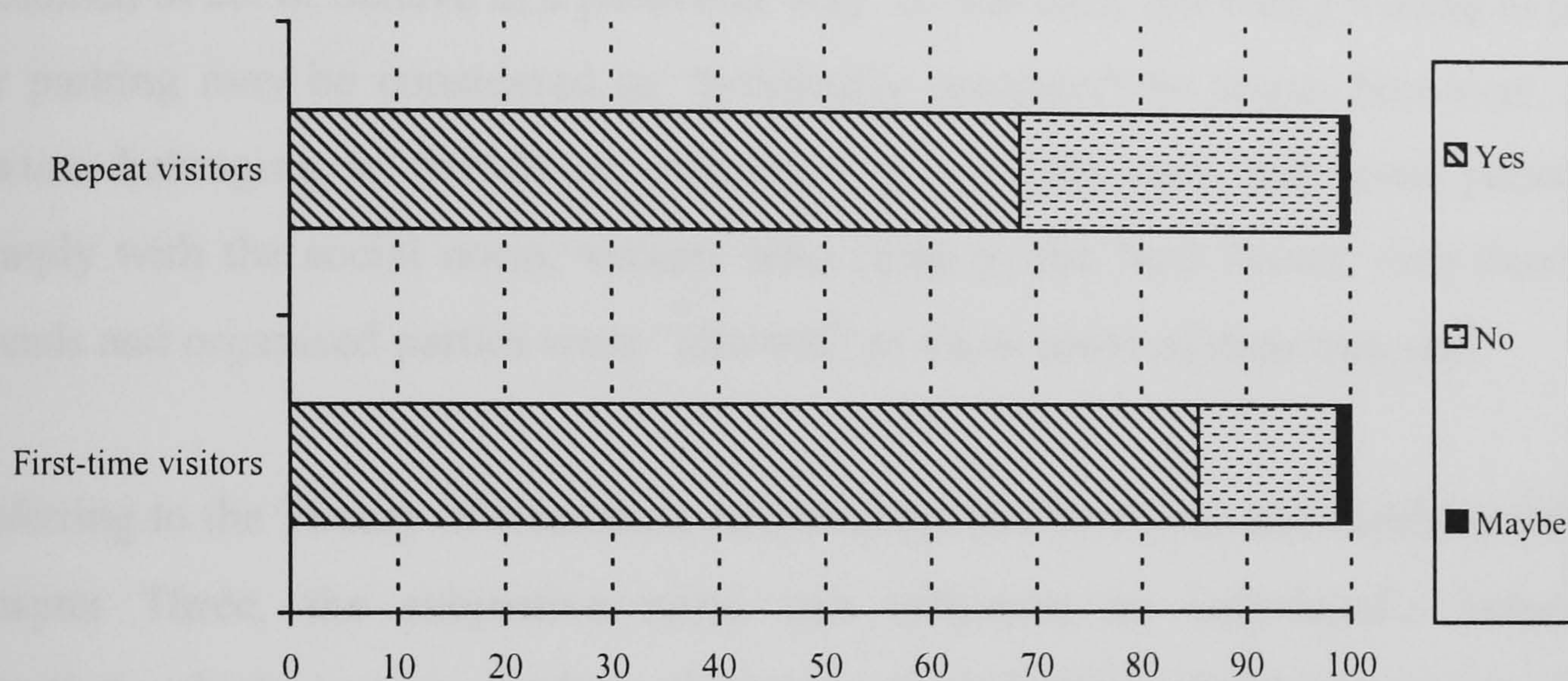


Figure 7. 17: The comparison between the first-time and repeat visitors' willing to pay for car parking in the Crown Lands of the New Forest.

7.10.6 The Differences between Visitor Group Composition and their Willingness to Pay for Hypothetical Car Park Charges

Examining a further three factors that might have influences on a visitors' willingness to pay for car parking, namely visitor group composition, economic status and age, the analysis shows significant differences in the relationship in each of these factors and visitors' willingness to pay for car parking. The results indicate that visitor groups made up of friends or colleagues are more likely to be willing to pay for car parking, whilst those who come to the New Forest on their own are least likely to pay. This might be because that visitors felt pressure if they responded as being "not willing to pay for car parking" in front of their friends or colleagues.

Visitors who come to the New Forest with organised parties, such as coach tours, and in visitors groups made up of family members and friends, show less willingness to contribute to car parking charges. Coach tours are usually made up of individuals, they know little about one another, and they might not have further contact in the future. On the other hands, it is likely that visitors in the family and friends groups know each other to a great extent, that is, an individual is less likely to introduce their not-so-close friends and acquaintances to their family. In other words, visitors belong to organised parties and groups of family and friends are less likely to be pressured or presumed to act or behave in a particular way. In this case, not being willing to pay for car parking may be considered as “politically incorrect” by some. However, unlike visitors belonging to friends or colleagues group who may feel some pressure to comply with the social norm, visitors who came to the New Forest with family and friends and organised parties were “allowed” to show more of their true self.

Referring to the Theory of Reasoned Action proposed by Ajzen and Fishbein (1980) in Chapter Three, the subjective norm can influence an individual’s behavioural intention, which, in turn, leads to the particular behaviour. Subjective norm derived from an individual’s beliefs that specific person/people think particular behaviour should or should not be performed and the individual’s motivation to comply with the specific referents. In the case of visitors came to the New Forest with friends or colleagues, they may feel it is necessary to establish their image in front of their group and perceive their willingness to pay for car parking as what the referents want. However, members in an organised party such as coach tour are less likely to be influential referents to affect other’s motivation in the group to comply with them. Hence, the visitors felt freely to respond whether or not they would like to pay for car parking, which explains the lower proportion of the visitors of this group who were willing to pay for car parking. Visitors who came to the New Forest with family and friends are more possible to have closer relationship with each other, which suggests they felt less need to behave in a particular manner in order to establish a certain image to please the referent. Hence they could express what they thought of paying for car parking (See Table 7.42).

Table 7. 42: Visitors' willingness to pay for car parking and their group composition.

Visitor group composition (no. of visitors)	% of visitors' willingness to pay for car parking (no. of visitors)
Family group (671)	Yes - 74.4% (499) No - 25.2% (169) Maybe - .4% (3)
Friends/colleagues (228)	Yes - 80.7% (184) No - 19.3% (44) Maybe - 0
Organised party (25)	Yes - 60% (15) No - 16% (4) Maybe - 24% (6)
Family and friends (121)	Yes - 59.5% (72) No - 40.5% (49) Maybe - 0
I am on my own (8)	Yes - 50% (4) No - 37.5% (3) Maybe - 12.5% (1)

7.10.7 The Differences between Visitors' Economic Status, Age and their Willingness to Pay for the Hypothetical Car Park Charges

The sampled visitors' economic status tends to be positively correlated with their age - those at full-time education concentrated in the age category of "under 15", and "between 15 and 25"; most of the retired people belong to the age group of "over 61" (See Table 7.43).

Table 7. 43: The distribution of the sampled visitors' economic status and age.

Economic status	Age (no. and % of the total samples)					
	Under 15	15-25	26-40	41-60	Over 61	Total
Full-time paid work	0	84 (8%)	396 (37.6%)	173 (16.4%)	12 (1.1%)	665 (63.2%)
Part-time paid work	0	7 (.7%)	42 (4%)	20 (1.9%)	5 (.5%)	74 (7%)
Full-time home or child care	0	2 (.2%)	31 (2.9%)	13 (1.2%)	4 (.4%)	50 (4.7%)
Full-time education	9 (.9%)	66 (6.3%)	10 (.9%)	1 (.1%)	0	86 (8.2%)
Retired	0	0	0	12 (1.1%)	154 (14.6%)	166 (15.8%)
Unemployed	0	11 (1%)	1 (.1%)	0	0	12 (1.1%)
Total	9 (.9%)	170 (16.1%)	480 (45.6%)	219 (20.8%)	175 (16.6%)	1,053

The analysis shows statistically significant differences in the relationship of the sampled visitors' economic status and their willingness to pay for car parking in the New Forest - those who were undertaking full-time education, retired and unemployed were less willing to pay for car parking. In terms of the sampled visitors' age, the results also show statistically significant differences in the relationship between their age and willingness to pay for parking, that those who were under 15 and over 61 are less willing to pay for car parking (See Table 7.44).

Table 7. 44: The percentage of the sampled visitors' economic status and age, and their willingness to pay for car parking in the New Forest.

Age (no. of visitors)	Economic status (no. of visitors)	Willingness to pay for car parking in the New Forest (no. of visitors and % within the sub-group of age/economic status)			
		Yes	No	Maybe	Total
Under 15 (9)	Full-time education	4 (44.4%)	5 (55.6%)	0	9
15-25 (170)	Full-time paid work	69 (82.1%)	13 (15.5%)	2 (2.4%)	84
	Part-time paid work	6 (85.7%)	0	1 (14.3%)	7
	Full-time home or child care	1 (50%)	1 (50%)	0	2
	Full-time education	46 (69.7%)	14 (21.2%)	6 (9.1%)	66
	Unemployed	10 (90.9%)	0	1(9.1%)	11
26-40 (480)	Full-time paid work	326 (82.3%)	70 (17.7%)	0	396
	Part-time paid work	30 (71.4%)	12 (28.6%)	0	42
	Full-time home or child care	26 (83.9%)	5 (16.1%)	0	31
	Full-time education	6 (60%)	4 (40%)	0	10
	Unemployed	1 (100%)	0	0	1
41-60 (219)	Full-time paid work	114 (65.9%)	59 (34.1%)	0	173
	Part-time paid work	15 (75%)	5 (25%)	0	20
	Full-time home or child care	10 (76.9%)	3 (23.1%)	0	13
	Full-time education	1 (100%)	0	0	1
	Retired	5 (41.7%)	7 (58.3%)	0	12
Over 61 (175)	Full-time paid work	7 (58.3%)	5 (41.7%)	0	12
	Part-time paid work	3 (60%)	2 (40%)	0	5
	Full-time home or child care	2 (50%)	2 (50%)	0	4
	Retired	92 (59.7%)	62 (40.3 %)	0	154
Total		774	269	10	1,053

7.10.8 The Deemed Acceptable Daily Car Park Charges

In addition to exploring visitors' willingness to pay for car parking, it is also necessary to explore the amount of car park charges that visitors considered acceptable. Visitors who claimed to be willing to pay for car parking were surveyed with respect to the perceived acceptable or appropriate car park charges, based on the assumption that the

charges are of the type of day-ticket transferable among the car parks in the Crown Lands of the New Forest. The figure below shows the percentage of the visitors and the amount of car park charges they would be willing to pay (See Figure 7.18). Among those visitors who declared that they would be willing to pay for car parking, nearly 60% of them suggested that £3.00-5.00/day for parking ticket in the Crown Lands was the most appropriate charge.

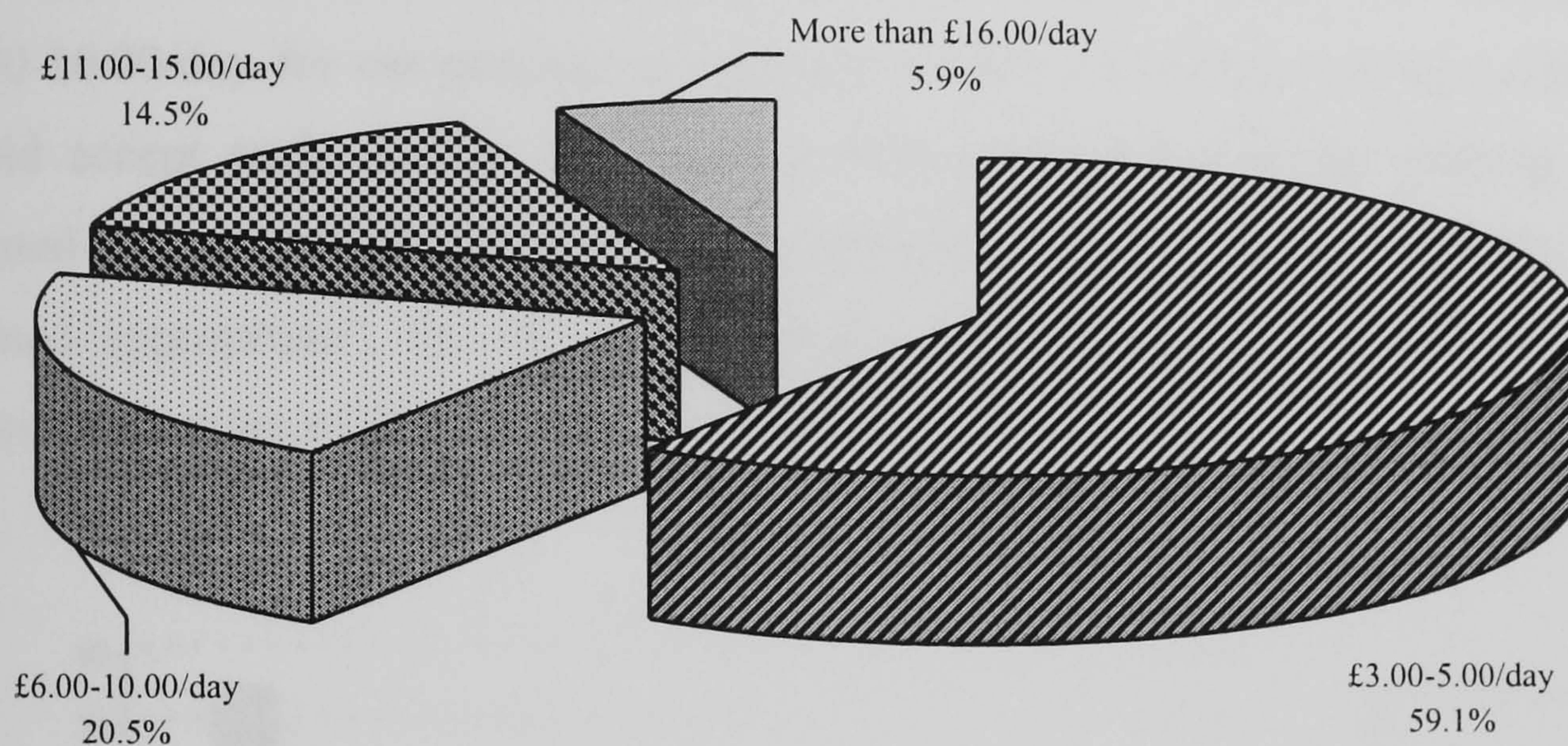


Figure 7. 18: The percentage of the visitors in the category of the preferred daily car park charges in the Crown Lands of the New Forest (774 samples).

The factors that affected visitors' willingness to pay for car parking in the New Forest, including whether they stayed in the New Forest overnight, the geographical origins of their residences, whether they were first-time visitors, visitor group composition, economic status and age, have been discussed so far. These factors also influence the amount of car park charges the visitors considered to be acceptable - the analysis shows significant differences in the relationship between these factors and the deemed acceptable level of car park charges.

It should be noted that in the discussion as to the most acceptable car park charge, the sample size is 774 - these are the visitors who claimed to be willing to pay for car parking in the Crown Lands of the New Forest.

7.10.8.1 The differences between staying visitors/excursionists and their deemed acceptable car park charges

As shown in Figure 7.18, £3.00-5.00/day is considered the appropriate and acceptable car park charges by most of the visitors. Splitting the visitors into staying visitors and excursionists, the result shows that £3.00-5.00/day car park charges was considered acceptable by nearly three-quarter of all the staying visitors but by less than half of the excursionists. However, more than one-third of the excursionists were willing to pay £6.00-10.00/day for car parking, as opposed to only 5% of the staying visitors who would accept such charges. Although a higher proportion of the staying visitors claimed that car park charges would be acceptable, when the issue is of "how much is deemed appropriate", the excursionists who were willing to pay for car parking demonstrate more willingness to pay for higher car park charges (See Figure 7.19).

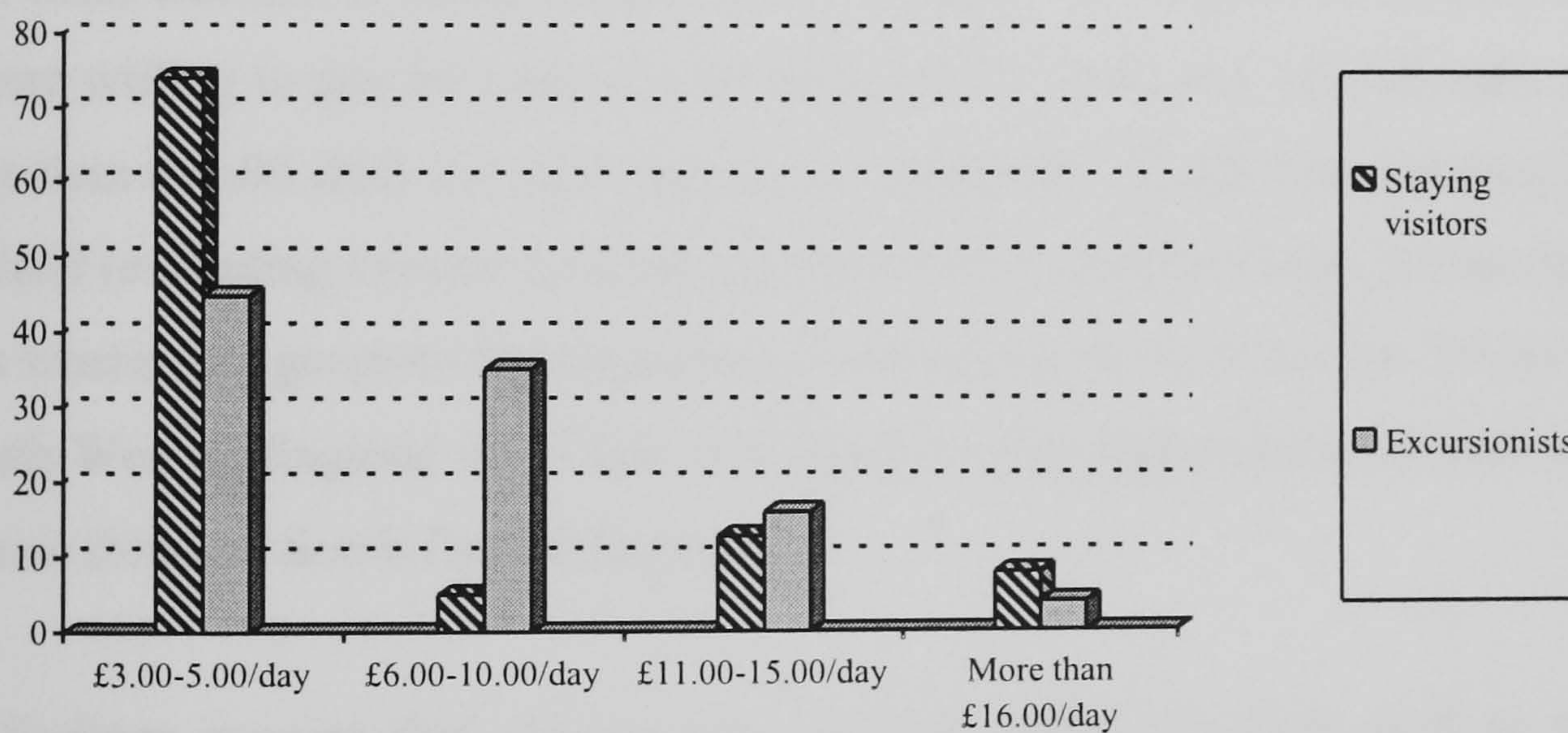


Figure 7. 19: The comparison between staying visitors and excursionists' deemed acceptable daily car park charges (valid sample 774).

Coming to the New Forest to carry out recreational activities is in fact economical for the excursionists. There are little opportunities to spend money on in the New Forest - it is free to explore the site, and therefore, the possible expenditure is likely to be for food and drink, bicycle hire, and entrance charges for some special attractions such as the Motor Museum in Beaulieu. Nonetheless, visitors are less likely to repeatedly visit such attractions. Thus the expenses for attraction entrances tend to be one off incident.

Of the relatively low expenditure for excursionists may contribute to their willingness to pay for higher car park charges. On the other hand, staying visitors, even though their expenditure allowances are higher than of those for excursionists, the expenses on accommodation, food and drink and other sorts suggest that their daily available disposable budget may be more limited. Furthermore, staying visitors are likely to view the money they have to spend during their stay in the site as an economic contribution to the local economy, therefore, even though they were willing to pay for car parking, the deemed acceptable car park charges tend to be lower.

7.10.8.2 The differences between visitors' geographical origins and their deemed acceptable daily car park charges

Examining the visitors' geographical origins of their residences, the results show that visitors from Greater London area are more willing to pay higher car park charges - 25% of them claimed to accept daily car park charges of between £6.00 and £10.00; 22% were willing to pay between £11.00 and £15.00 a day, and 15% thought as high as more than £16.00 daily car park charges as acceptable. South East and South West of England (excluding Greater London and New Forest District Local) are another two regions where they generate large numbers of visitors to the New Forest. Visitors from the South West of England show less willingness to pay higher daily car park charges than those from the South East of England.

These findings suggest that visitors from densely populated areas such as Greater London and the South East of England where car park charges tend to be higher would be willing to accept higher car park charges when they carry out recreational and holiday activities. Because they are used to being charged more for car parking in where they reside or work, when they are on holiday or enjoying a day out in the New Forest, they are more likely to accept higher daily car park charges. Moreover, these people's income level may be higher and their disposable income is more, therefore, their deemed acceptable daily car park charges are higher. However, the researcher suspects although some visitors declared their perceived acceptable daily car park

charges in the New Forest to be as much as more than £16.00, whether or not they would be willing to pay for that amount of car park charges remains unknown until such high car park charges are introduced.

Referring to the theory of classical conditioning discussed in Chapter Three (Pavlov, 1927; Hergenhahn, 1982), paying for car parking is responded when an individual sees a sign of “pay and display”. In other words, paying for the required car park charges is the unconditioned responses, and the unconditioned stimulus is the sign of “pay and display”. When an individual goes to the New Forest to undertake recreational activities or holiday (conditioned stimulus), they are likely to respond in a manner that paying for car parking is the normal practice, and they expect to pay the same rate as they do in their place of residence or work. This is because visitors from areas where car park charges are of high rate, their previous experiences are likely to be applied even when they are in a different area.

Furthermore, Skinner’s theory of operant conditioning can also be interwoven with the classical conditioning to explain the findings of the perceived acceptable higher car park charges by the visitors from the South East of England and Greater London (Skinner, 1953, 1954, 1974). When paying for high car park rates is used as a “punishment” tool by local authorities to discourage people from using their own vehicles, the effect of such punishment may be short-lived. In other words, after a while, motorist will use their own vehicles again because the convenience of using their own vehicles outweighs the financial burden. Thus, even when they are not in their home environment, they do not feel the effect of punishment (car park charges). Instead, they responded in a way that they accept higher charges for car parking when they are on holiday or carrying out recreational activities in the New Forest. In other words, the new stimulus, the New Forest, does not have influences on these visitors’ responses towards car park charges, because they may be used to being charged for high rate (punishment).

The table below shows the percentages of visitors from different regions and their perceived acceptable car park charges (See Table 7.45).

Table 7. 45: The distribution of visitors from different geographical regions and their deemed acceptable car park charges.

Region (no. of visitors)	Acceptable daily car park charges in the Crown Lands of the New Forest (% and no. of visitors within the category of region)			
	£3.00-5.00/day	£6.00-10.00/day	£11.00-15.00/day	£16.00/day or more
North East of England (7)	57.1% (4)	42.9% (3)	0	0
North West of England (18)	77.8% (14)	22.2% (4)	0	0
Yorkshire and Humber (15)	93.3% (14)	0	6.7% (1)	0
West Midland (23)	56.5% (13)	30.4% (7)	13% (3)	0
East Midland (27)	85.2% (23)	3.7% (1)	11.1% (3)	0
East of England (31)	58.1% (18)	12.9% (4)	22.6% (7)	6.5% (2)
SW of England (144)	70.8% (102)	18.8% (27)	9% (13)	1.4% (2)
SE of England (exc. Greater London and NF District) (285)	59.3% (169)	21.1% (60)	14.7% (42)	4.9% (14)
Greater London (189)	38.1% (72)	25.4% (48)	21.7% (41)	14.8% (28)
New Forest District Local (17)	100% (17)	0	0	0
Scotland (2)	0	100% (2)	0	0
Wales (7)	57.1% (4)	42.9% (3)	0	0
International visitors (9)	77.8% (7)	0	22.2% (2)	0

Valid sample - 774

7.10.8.3 The differences between first-time/repeat visitors and their deemed acceptable car park charges

First-time visitors were not only more willing to pay for car parking in the New Forest, they were also prepared to pay higher car park charges. The findings show that

more than 70% of the repeat visitors would accept the daily car park charges of between £3.00 and £5.00, but only 17% of them were willing to pay between £6.00 and £10.00. On the other hand, over a quarter of the first-time visitors perceived the daily car park charges of £6.00-£10.00 appropriate, and 22% of them thought £11.00-£15.00/day were acceptable car park charges. Furthermore, examining the repeat visitors' frequencies of visits and their perceived acceptable daily car park charges, the analysis also shows statistically significant differences - that generally infrequent repeat visitors are more willing to pay for higher car park charges.

For the first-time visitors, the sense of "novelty" when they first come to the site may contribute to their willingness to be charged higher rates for car parking. Because they are not familiar with the New Forest, the feeling of excitement and exploration of a new area is likely to overcome their sense of expenditure. As for the repeat visitors, especially those who come to the site more often, they prefer to be charged between £3.00 and £5.00/day for car parks. Because they come here often, if they had to pay more than £5.00/day for car parking, the notion of "the more I come, the more I have to spend" sinks in and therefore they do not wish to be charged higher car parking rates. Therefore, although they expressed their willingness to pay for car parking in the New Forest, it is clear that minimal charges are preferred and deemed acceptable. As opposed to the 17% of the first-time visitor who were willing to pay for more than £16.00/day for car parking, none of the repeat visitors considered it acceptable. The table below shows the first-time and repeat visitors' percentage in accordance of their perceived acceptable daily car park charges (See Table 7.46).

Table 7. 46: The percentage of the first-time and repeat visitors' deemed acceptable daily car park charges.

Visitor category (no. of visitors)	Acceptable daily car park charges in the Crown Lands of the New Forest (% and no. of visitors within the visitor categories)			
	£3.00-5.00/day	£6.00-10.00/day	£11.00-15.00/day	£16.00/day or more
First-time visitors (264)	33.7% (89)	26.5% (70)	22.3% (59)	17.4% (46)
Repeat visitors (510)	72.2% (368)	17.5% (89)	10.4% (53)	0
Repeat visitors' frequency of visit				
More than 10 times/year (69)	85.5% (59)	10.1% (7)	4.3% (3)	0
6-10 times/year (39)	76.9% (30)	17.9% (7)	5.1% (2)	0
3-5 times/year (78)	64.1% (50)	17.9% (14)	14.9% (14)	0
1-2 times/year (158)	64.6% (102)	22.8% (36)	12.7% (20)	0
Less than one visit/year (166)	76.5% (127)	15.1% (25)	8.4% (14)	0

7.10.8.4 The differences between visitors' economic status, age and their deemed daily car park charges

Visitors who had full-time paid jobs show more willingness to pay the higher £6.00-£10.00/day car park charges, and quite naturally, the lowest car park charges of £3.00-£5.00/day were favoured by most of the retired visitors. In general, visitors' deemed acceptable daily car park charges to be in accordance with their financial ability, that those who were retired, unemployed and in full-time education tended to prefer lower car park charges (See Table 7.47).

Table 7. 47: Visitors' economic status and their view of appropriate daily car park charges.

Age (no. of visitors)	Economic status (no. of visitors)	Acceptable daily car park charges in the Crown Lands of the New Forest (no. of visitors and % within the sub-group of age/economic status)			
		£3.00-£5.00	£6.00- £10.00	£11.00- £15.00	£16.00 or more
Under 15 (4)	Full-time education (4)	4 (100%)	0	0	0
15-25 (132)	Full-time paid work (69)	33 (47.8%)	11 (15.9%)	18 (26.1%)	7 (10.1%)
	Part-time paid work (6)	5 (83.3%)	1 (16.7)	0	0
	Full-time home or child care (1)	1 (100%)	0	0	0
	Full-time education (46)	32 (27.9%)	14 (30.4%)	0	0
	Unemployed (10)	9 (90%)	0	0	1 (10%)
26-40 (389)	Full-time paid work (326)	166 (50.9%)	65 (19.9%)	64 (19.6%)	31 (9.5%)
	Part-time paid work (30)	30 (2.8%)	12 (1.1%)	0	42 (4%)
	Full-time home or child care (26)	24 (92.3%)	2 (7.7%)	0	0
	Full-time education (6)	6 (100%)	0	0	0
	Unemployed (1)	1 (100%)	0	0	0
41-60 (145)	Full-time paid work (114)	57 (50%)	26 (22.8%)	26 (22.8%)	5 (4.4%)
	Part-time paid work (15)	9(60%)	5 (33.3%)	0	1 (6.7%)
	Full-time home or child care (10)	7 (70%)	3 (30%)	0	0
	Full-time education (1)	1 (100%)	0	0	0
	Retired (5)	3 (60%)	2 (40%)	0	0
Over 61 (104)	Full-time paid work (7)	4 (57.1%)	2 (28.6%)	1 (14.3%)	0
	Part-time paid work (3)	3 (100%)	0	0	0
	Full-time home or child care (2)	2 (100%)	0	0	0
	Retired (92)	75 (81.5%)	17 (18.5%)	0	0

Interestingly, a quarter of the visitors in full-time education expressed a willingness to pay £6.00-£10.00 daily car park charges. Further investigation of these visitors' age, 14 out of the 15 (93%) reveals that visitors in full-time education and willing to pay up to £10.00/day car park charges were between 15 and 25 years old. This suggests that

young students are inclined to adopt a more idealistic approach towards dealing with various issues such as one's own abilities in finance and problem solving. Because the research question is based on the assumption that the car park charges would be used to protect and manage the resources in the New Forest, the idea of "helping to preserve the environment" may have high appeal among young students. Thus, they would be willing to pay for more than the minimal charges of £3.00-£5.00/day.

The results indicate that as many as three quarters of the visitors would be willing to pay for car parking in the Crown Lands of the New Forest, based on the assumptions that the financial gain would be used for resource protection and management, and the car park charges should be applied on a daily, transferable basis that can be used throughout the car parks in the Crown Lands. Such assumption of using the financial gain from car park charges for resource management is believed to boost visitors' willingness to pay for car parking, because it implies the political correctness. The car park charges of £3.00-£5.00/day were perceived appropriate and acceptable by nearly sixty percent of the willing visitors. Factors including whether they are staying overnight in the New Forest, whether they are first-time visitors, their geographical origins of their residences, economic status and age, impose influences on the visitors' willingness to pay for car parking, as well as on their deemed acceptable car park charges.

However, the fact that 26% of all visitors would not be willing to pay for car parking suggests the notion of "it has always been free for car parking in the New Forest" is rooted in their mind. They are likely to have the idea that the New Forest as well as many other tourism destinations such as national parks are seen as public commodities that belong to the public and should be enjoyed and accessed by the public with minimal control. Therefore, they are more likely to reject the management methods that are involved with the application of restrictions and regulations. In such situation, education oriented information such as interpretation emphasises on the values of the resources in the New Forest and how the resource protection schemes would benefit from the financial gain from the car park charges, would have more appeal to these

visitors to come to accept the economic visitor management strategies suggested by Orams (1996).

Providing interpretive information of how the New Forest environment has been preserved and managed through the funding from car park charges, visitors may be more willingly to pay for car parking. Information of why cars should be parked in designated car parks should also be provided, as visitors need to be made aware of the impacts of inappropriate parking on resources in resource sensitive sites, such as the disturbance on wildlife and the vegetation. Such specific interpretive information might be able to reduce inappropriate parking in the open forest, because visitors would have better understanding on the impact of uncontrolled parking and how the money would be used to protect the resources. In other words, using interpretation in conjunction with the economic visitor management strategy to enhance visitors' sense of "citizenship" to help the management and protection of the resources can achieve the objectives of protecting the New Forest environment and providing high quality recreational experiences laid out by the managing agencies.

The Forestry Commission continuously carries out assessments of the locations of car parks in the Crown Lands. If they are too close to resource sensitive areas, the Forestry Commission would opt for the approach of physical alteration by either closing down the car park, reducing its capacity or limiting the facilities in those car parks. In so doing, the volume of the visitor flow becomes limited or diverted to other alternative locations where are more suitable to sustain recreational uses. Other physical methods used by the Forestry Commission include the use of ditch, bank, and dragon teeth (small poles) along the roads and sensitive sites to prevent visitors' vehicles from entering. Although these physical restrictions are effective in channelling visitors away from the sensitive locations, they are less likely to increase visitors' enjoyment in and understanding of the New Forest. Providing interpretation of the purposes of these restrictions on access and the sensitive resources that the Forestry Commission aims to protect would give visitors an insight into the value of the resources whilst increasing their knowledge of the species. In short, managing visitors' activities

requires a balanced combination of hard and soft strategies, including economic (car park charges), restriction on access and interpretation.

7.11 VISITORS' POTENTIAL OF BEHAVIOURAL MODIFICATION AFTER RECEIVING FURTHER INFORMATION WITH RESPECT TO THE NEW FOREST' ENVIRONMENTAL ISSUES

If visitors are made more aware of the environmental issues relating to the New Forest, they may be more likely to modify their behaviour and activities to be more environmentally friendly. One should recognise that the induced behavioural modification after receiving information is unlikely to occur to all the individuals. Therefore, some researchers regard the application of legal restrictions and regulations as an effective strategy to achieve the objectives of managing a tourism destination (Hendee et al, 1990). Nonetheless, researchers recognise that educating visitors the impacts of their inappropriate behaviour can be an influential method to manage visitors (Heldee et al, 1990; Roggenbuck, 1992). Moreover, persuasive communication is argued to have, to some extent, effects on modifying visitors' behaviour, especially when the communication is continuous and fluent (Knudson et al, 1995; Roggenbuck, 1992). It is necessary to stress that measuring an individual's behavioural modification is time consuming and unpractical to the purposes of this research project. However, findings from this particular research question would provide an insight into visitors' intentions whether they would modify their activities after they were given more relevant information regarding the environmental issues of the New Forest. Since an individual's intentions usually are the precursors to their behaviour, examining the visitors' thoughts of intending to undertake a particular behaviour should point out whether the information provided is sufficient to encourage visitors to alter their intentions to behave.

The link between persuasive communication and behavioural modification is not easy to identify, because people's individuality makes it difficult to standardise the contents and delivery of persuasive communication. Also, behaviour is induced and influenced

by several factors, including personal factors, subjective norms, skills to act and knowledge. Under such circumstances, the researcher limited all the possible influential factors into the few essential ones – the persuasive message, the thoughts of intending to behave in a particular manner after receiving such message, and using visitors' willingness to carry out a particular behaviour to identify whether the link between information receiving and behavioural modification exists.

Firstly, the sampled visitors were asked if they were given more information relating to the negative impacts resulting from inappropriate activities and recommending favoured ones that visitors are encouraged to carry out, whether they would intend to modify their current behaviour. The frequencies show that nearly 30% of the total sampled visitors showed no intentions to modify their current behaviour, whilst the remaining visitors responded positively that they would make an effort to modify their inappropriate activities to be more responsible (See Figure 7.20).

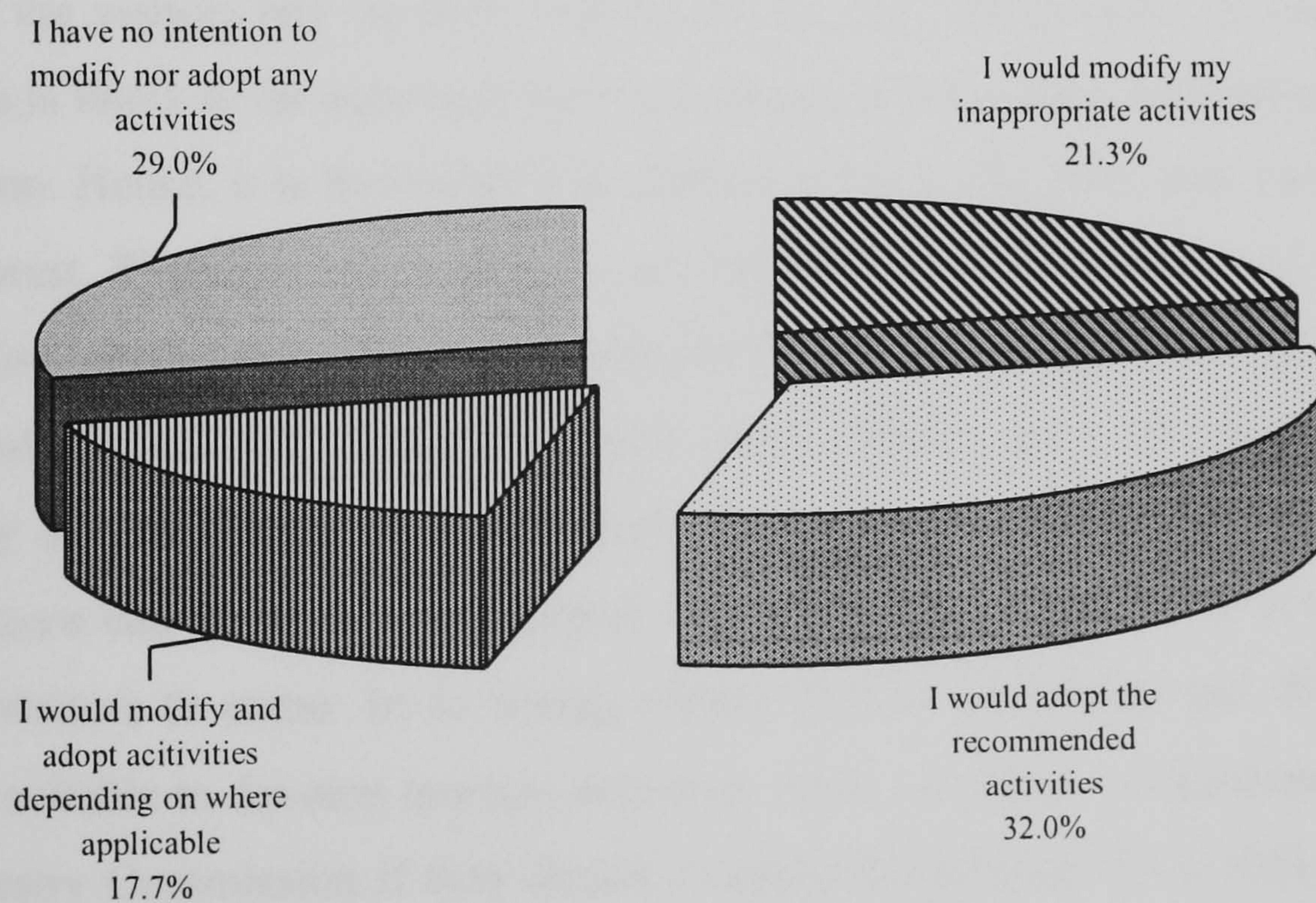


Figure 7. 20: The percentage of visitors' responses to potential behavioural modification after receiving further relevant information (sample size - 1,051, missing - 2).

The above frequency results are not sufficient to provide evidence that identifies the link between information receiving and behavioural modification. Thus, the visitors' willingness to pay for car parking was used as an indicator to examine whether the relationship between information receiving and the induced behavioural modification exists. The question of whether or not willingness to pay for car parking is based on the assumption that the financial gain would be used for resource management and protection. Such an assumption is necessary as it is the "relevant information", of which importance is stressed by many researchers in the fields of tourism management, communication and persuasion, as well as in behavioural psychology (Ajzen and Fishbein, 1980; Hams, 1992; Hendee et al, 1990; Hines et al, 1986/87; Hungerford and Volk, 1990; Orams, 1996; Roggonbuck, 1992; Tilden, 1977).

The majority of the visitors relies on their private vehicles to come to the site. Not only the convenient links between motorways and local road networks has led to such a situation, but also, the lack of on-site public transportation and the flexibility of driving around in the New Forest at one's own pace contributes to the fact that the majority of the visitors rely on their vehicles in the site. The benefits of using one's own vehicle is likely to far outweigh the inconveniences associated with other form of transportation. Hence, it is inevitable that visitors prefer to use their own cars to visit the New Forest. Therefore, car parks play a vital role in the management of the New Forest – those immediately adjacent to resource sensitive or fragile locations, such as Ancient and Ornamental Woodlands and heath lands, may be closed, either permanently or temporarily. In more robust areas, such as timber inclosures, where visitor pressure can be more easily coped, the size of car parks can be extended to encourage visitors to come. In so doing, visitor flow is channelled and diverted to areas more suitable to develop tourism activities. Also, car parks can generate income for the Forestry Commission if they decide to apply the scheme of car park charges. Providing relevant information with respect to the reasons for charging for car parking, for example, lack of funding, and the utilisation of the financial gain, visitors' knowledge and understanding of the New Forest might be increased. Moreover, their intentions to engage in desired behaviour, for instance, paying for car parking and

participating in more appropriate activities may be induced. Hence, visitors' willingness to pay for car parking is used as an indicator to identify the formation of their intentions to engage in desired behaviour after their receiving of relevant information.

The findings show statistically significant differences in the relationship between visitors' intentions to modify their behaviour and their willingness to pay for car parking - that those visitors who indicated intentions to alter their behaviour are more willing to pay for car parking (See Table 7.48).

Table 7. 48: The relationship between visitors' intentions to modify their behaviour and their willingness to pay for car parking in the Crown Lands of the New Forest.

Visitors' intentions to modify their behaviour (no. of visitors)	Visitors' willingness to pay for car parking (% and no. of visitors)
I would modify my existing activities/behaviour to be more environmentally friendly wherever possible (224)	Willing to pay for car parks – 76.3% (171) Not willing to pay for car parks – 23.7% (53) Maybe – 0
I would adopt/make use of the suggested activities (336)	Willing to pay for car parks – 80.1% (269) Not willing to pay for car parks – 19% (64) Maybe – .9% (3)
I would both modify my existing behaviour and adopt the suggested activities where possible (186)	Willing to pay for car parks – 80.1% (149) Not willing to pay for car parks – 19.9% (37) Maybe – 0
I would have no intention to modify my or adopt the suggested activities but remain as I am (305)	Willing to pay for car parks – 60.3% (184) Not willing to pay for car parks – 37.7% (115) Maybe – 2% (6)

Sample size: 1,051 visitors. 2 missing samples.

The results indicate the link between information receiving and the formation of behavioural intention - seventy percent of the sampled visitors claimed they would intend to alter their behaviour or activities if they could be given relevant information. This link is further proven by the finding that those who claimed they would modify

their existing activities or adopt the recommended ones after receiving further information about the New Forest environmental issues show a much higher percentage of willingness to pay for car parking. Providing information such as the damages resulting from uncontrolled visitor access to sensitive areas, and the potential threat of lack of funding to carry out resource management is likely to persuade visitors' involuntarily financial contribution, that is, their willingness to pay for car parking. Hence, such persuasion strategy of providing relevant information to the information receiver can be used more widely in the management of visitors in the New Forest.

The existing visitor codes do not carry the persuasion function, and they seem to be more regulation oriented, which may be likely to arouse visitors' adverse feeling towards the managing agencies, including their management policies. Positive and persuasive information that can be provided to visitors include the conservation work carried out and its results, what visitors can contribute towards the resource protection, and the benefits of managing and conserving the New Forest in the aspects of tourism and recreational uses as well as of social benefits. By providing such information, visitors may be more likely to engage in the desired behaviour and activities that the managing agencies promote them to participate.

SUMMARY

In this Chapter, the researcher estimated the annual usage of the New Forest by visitors, as well as discussing the implications of the research. It is determined that some 2.3 millions visitor days per annum were carried out by excursionists (day visitors) for their recreational purposes, and the number of visitors who stay overnight in the New Forest may be as many as 5,500,000, who contributed as many as 2.75 million visitor days in the site. In other words, the annual usage of the New Forest for recreational purposes by all visitors may be as high as 5.05 million visitor days. The Land Management Research Unit of Portsmouth University (1996) suggests that in the 1980s, the number of day visitors to the site was between 7 and 9 million per annum,

and since then the number of visitors is likely to increase steadily with an annual rate of 2%. That is, by early 2000, the number of visitors to the New Forest per annum may be as high as 10 million. This figure indicate that the New Forest serves an important recreational destination, especially for those who reside in the surrounding regions of the site.

Moreover, a profile of the sampled visitors was built up based on the research findings. The results suggest that the New Forest has a well-established reputation among the visitors as ideal destination to undertake outdoor activities. It is a family-friendly destination, and facilities such as car parks, toilet blocks, Tourist Information Centres, designated walks and cycle tracks are perceived as good standard. Although the physical conditions of these facilities are considered above average, the results point out that the role signage plays in delivering directorial and interpretive information could be developed further. Moreover, the findings show that printed materials are the medium favoured by most of the visitors, from which they preferred to collect information about a tourism destination. With respect to visitors' knowledge of the existing visitor codes, the results show visitors' lack of awareness in some codes, especially the one relating to parking. Although visitors' familiarity of the New Forest increases their awareness of the visitor codes, there are frequent visitors as well as local residents who were not aware of some of the codes. This reflects on the effectiveness of the current signage in delivering information.

Moreover, the sampled visitors demonstrated their willingness to pay for car parking and their deemed appropriate daily car park charges in the Crown Lands of the New Forest. Although these findings were based on the hypothetical question of whether visitors would be willing to pay for car parks, the findings suggest a positive link between information receiving and visitors' intentions to behave in a particular manner. Such link is further demonstrated by asking the sampled visitors whether they would intend to alter their activities if they would be given more information relating to the environmental issues of the New Forest and the appropriate activities to undertake. Factors such as an individual's economic status and subjective norm have

influences on an individual's producing of intention to behave in a particular manner, which is consistent with several theories of behavioural modification proposed by various scholars (for example, Ajzen and Fishbein, 1980; Hines et al, 1986/87; Hungerford and Volk, 1990).

Such implications point out that although the usage of the New Forest per annum is high, tourism development is not the enemy to the resources of the site. Visitors are willing to contribute financially in the form of car park charges, they also demonstrated intentions to modify their behaviour to be more responsible, if they are made more aware of the environmental issues relating to the New Forest. By improving the media used in the New Forest in terms of the information contents and the delivery of information, visitors' knowledge of the site can be increased and in turn, their intentions to be more environmentally responsible during their visits to the site are likely to be enhanced.

CHAPTER EIGHT

CONCLUSION

INTRODUCTION

A thorough understanding of the theories of human's behavioural modification, communication and persuasion is necessary in order to plan and implement effective visitor management practice in a tourism destination. Visitor management aims to enhance visitors' experience and enjoyment at a site. It also attempts to modify visitors' on-site behaviour to be more appropriate through the use of a combination of various approaches, including interpretation, restrictions, regulations, visitor codes and resource alteration. From the discussions in the earlier chapters of literature review, it is clear that these theories provide an underlying foundation to successful visitor management. Nevertheless, organisations responsible for managing tourism destinations may underestimate the role communication and persuasion plays in effective visitor management practice. In addition, one or some of the factors that affect an individual's intention to conduct a particular behaviour may be overlooked by the tourism site managing agencies during the planning of visitor management approaches. Hence, in this research, visitors' viewpoints of the practice of visitor management were explored in order to determine what types of media they prefer, what information can persuade visitors to modify their behaviour and visitors' perceptions of different approaches that currently applied.

The New Forest was selected as the research site, and the survey of New Forest visitors was carried out during the calendar year of 1999. The survey method was interviewer-completion, face-to-face questionnaire-based structured interview, and visitors were sampled based on a systematic approach. In total, 1,053 visitors participated in the survey. In this chapter, the research findings that presented in Chapter Seven are briefly summarised. The implication of these findings is discussed

and followed by the relating recommendations. It is hoped that the research results may be of use to managing organisations of the New Forest and other tourism destinations.

8.1 THE ESTIMATION OF NUMBER OF VISITOR DAYS PER ANNUM SPENT BY VISITORS FOR RECREATIONAL PURPOSES IN THE NEW FOREST

It is not possible to determine the annual number of visitors to the New Forest from the previous research studies that have taken place. This may be attributable to the fact that the site is large and the road network to and within the New Forest being extensive. These two factors make it difficult to identify the visitor flow with any precision once they arrive at the site - except for those well-known and highly used honey-pots. From observation, the New Forest often seems to be sparsely visited. Estimating the annual usage of the New Forest might be more representative and accurate to show the recreational demand that the site is experiencing, because one can be certain that the New Forest District locals and residents in the nearby towns and cities such as Christchurch, Bournemouth and the Southampton area, make up a large proportion of the annual usage of the site.

The "New Forest Sport and Recreation Study" (Land Management Research Unit, 1996) suggests that the number of visits to the New Forest made by the residents living within a 30 minutes drive from the site may be up to 18 million visits per year. Because of the convenient accessibility to the site, people residing in the New Forest neighbouring areas are likely to carry out frequent visits, but their length of stay in the site is usually shorter. Based on this figure and their research findings relating to these people's frequency of visit and their length of stay, the number of visitor days contributed by the residents living in the neighbouring region is estimated to be approximately 2.35 million per annum. The "1994 All Parks Visitor Survey" (Centre for Leisure Research and JMP Consultants Ltd., 1995) suggests that people residing in the surrounding areas of the New Forest contributed 80% of their estimated visitor

days (2.6 million days) spent by the day visitors to the site. Together with the usage of the New Forest made by the residents of the New Forest Heritage Area, the Centre for Leisure Research and JMP Consultants Ltd. estimates that the number of visitor days spent by the people living in and around the New Forest is approximately 2.3 million days.

Furthermore, the number of overnight stay visitors to the New Forest is estimated to be approximately 550,000, and the number of visitor days they spent in the site may be as many as 2.75 million days. Thus, in total, the researcher suggests that the number of visitor days spent by New Forest local residents, excursionists and overnight staying visitors are approximately 7.25 million days. People residing within and nearby the New Forest although contribute just under one-third of the total visitor days spent by all the visitors, their frequency of visits to the site is much higher, especially those local residents. They may use the New Forest to carry out their recreational activities, such as walking and dog walking on a daily basis, but their length of stay in the site may be as short as just an hour or even less. In addition to their high frequency of visit, the local users are more likely go to lesser-known areas in the New Forest because of their familiarity with the site. In other words, some visitor management techniques such as visitor codes and interpretation may be lacking in those locations. Also, those lesser-known areas may not be suitable to develop tourism because of the sensitivity or fragility of the resources, thus visits to these areas is discouraged. Because of local users' familiarity with the site, their carrying out activities in these lesser-known areas is likely to lead to negative impacts.

Given the fact that most of the road kills occurred in the New Forest are in fact committed by the local residents (Land Management Research Unit, 1996; personal communication with English Nature and New Forest District Council officials), it seems that local residents should be targeted to deliver information relating to visitor management, such as interpretation, speed limit, some restrictions on activities and entry to sensitive areas, and visitor codes.

8.2 THE IMPLICATIONS OF THE RESEARCH FINDINGS

8.2.1 The Profile of the Sampled Visitors

The research findings indicate that over 80% of the New Forest visitors are residents of the South of England, including Greater London. Moreover, repeat visitors who reside in the South visit the site more frequently than those who live farther away do. Also, the majority of the sampled visitors used their private vehicles to come to the New Forest. These findings reflect to the Forestry Commission's (2000) data that the site is easily accessible via an extensive road network within the Southern region. Because of the easy accessibility, flexibility and convenience of using one's own vehicle to come to the New Forest, the time lapse between decision making and coming to the site tends to be short - more than 55% of the visitors decided to come to the site less than 7 days prior to their arrival at the New Forest.

The factors that influence visitors' decision-making include the geographical origins of their residences, length of stay (staying visitors or excursionists) in the site and their familiarity (first-time or repeat visitors) with the site. Generally, the time lapse between decision-making and visiting the site is shorter for those visitors who live in the South, compared with those who reside further away. In other words, the required time and distance to travel to the site has a stronger influence on the visitors' decision-making process than the other two factors.

Furthermore, excursionists who do not stay overnight at the site, tend to make spontaneous decisions with regards to visiting the New Forest. However, as many as 41% of the staying visitors made the decision more than a month prior to their visits to the site. Clearly, accommodation booking and other commitments that they need to fulfil in their daily life mean that it is less likely for staying visitors to make spontaneous decisions relating to holiday making. In addition, first-time visitors tend to need longer time for their decision-making process than repeat visitors do. Repeat visitors have the advantage of familiarity with the site. Repeat visitors tend to know

where to go, what to do, how long they need to travel to and around the site and where to look for facilities and attractions to fulfil their needs and wants. First-time visitors are likely to need longer time periods to prepare and plan their visits because they are not familiar with the site. Figures 7.5 and 7.6 show the relationships between first-time/repeat visitors, and staying visitors/excursionists' time lapse between decision making and visiting the site.

Most of the sampled visitors came to the New Forest to undertake recreational activities, only a very few of them (7) came to the site for special interests - in this case, to pursue the Duke of Edinburg Award. Because it is necessary for the Duke of Edinburgh Award participants to obtain permits from the Forestry Commission, hence their decision was made more than 6 months prior to their visits to the site. Therefore, for the majority of the visitors, the factors that affect the time lapse between decision-making and visiting to the site are their length of stay (staying visitors or excursionists), geographical origins of residence, and visitors' familiarity with the site (first-time or repeat visitors).

The New Forest is a well-known place for the majority of the British citizens. However, the New Forest as a tourism destination may be less known to those who reside farther away from the South of England. "Word of mouth", information from an individual's personal source, proves to be an influential marketing channel in the case of promoting tourism in the New Forest. Nearly half of the first-time visitors heard about the New Forest as a tourism destination from their family or friends. Moreover, as one moves away from the New Forest and fewer people visit the site, the possibilities for "word of mouth" influence is likely to diminish. According to the marketing literature (Kotler et al, 1996), information obtained from personal sources is deemed to be more trustworthy. In other words, visitors are more likely to seek references from the peers in their social groups, and their influences upon an individual are likely to outweigh other types of marketing media.

Walking is the most popular outdoor activity undertaken by the sampled visitors, which matches the findings suggested in the secondary data. Other activities that visitors carried out include cycling, having a picnic, driving around the site and horse riding. Horse riding is not an activity undertaken by the majority of visitors - only 3% of the sampled visitors rode horses in the New Forest. Almost all of the visitors (more than 98%) had satisfied or very satisfied experiences from the outdoor activities they undertook in the site. Furthermore, visitors' enjoyable experiences associated with undertaking outdoor activities contributes positively to their overall satisfaction levels from visiting the New Forest.

Other factors that affect visitors' overall satisfaction levels include their perceptions of the quality/condition of the tourism facilities and the natural scenery. Visitors' experiences are directly associated with tourism facilities such as car parks in the site, accommodation, roads, footpaths, cycle tracks, signage, Tourist Information Centres, Information Booth, and toilet blocks. They use these facilities to undertake activities safely and comfortably, to fulfil their needs and wants and to acquire information to enable them to get on with their visits. Hence, the high quality of these facilities can help enhance the visitors' overall levels of satisfaction.

First-time visitors showed slightly lower perceptions of the quality of the tourism facilities (See Table 7.15). It is worth pointing out that both repeat and first-time visitors did not feel the signage in the New Forest is in good condition. Signage plays an important role in providing directorial, administrative, regulatory and interpretive information. In particular, road-side and trail-side signs can provide prompt information to visitors that enables them to know where they are or what they are looking at. Some previous research shows that visitors perceive positive learning experience after the implementation of trail-side interpretive signs (Hughes and Morrison-Saunders, 2002). For visitors who are not familiar with the site, on-tap information displayed on signage can reduce their frustration and help them explore the site with ease. Because of first-time visitors tend to rely on signs more than repeat

visitors do, they are more likely find the signs in the New Forest are situated at awkward locations, vandalised, too small a font to read or too few of them.

The research findings point out positive but small correlations between visitors' perceptions of the quality of some of the facilities, namely car parks, signage, toilet block, Tourist Information Centres/Information Booth, footpaths/cycle tracks, and accommodation, as well as the quality of the natural scenery and their overall levels of satisfaction. Among them, accommodation, footpaths/cycle tracks and the natural environment show higher positive correlations than others to visitors' overall satisfaction. Referring to visitors' activities, cycling and horse riding show medium and strong respectively positive correlation to their overall satisfaction, and walking, having a picnic and driving around show small correlation. Therefore, the combination of the "place" (the New Forest environment), the activities and the facilities that enabling visitors carrying out activities safely and comfortably contribute to visitors' overall experiences.

The findings also point out some differences between the first-time and repeat visitors' perceptions of the quality of the tourism facilities and its corresponding correlation with their overall levels of satisfaction. First-time visitors' perceptions of the quality of signage shows higher correlation to their overall satisfaction, compared to very low but still positive correlation between repeat visitors' perceptions and their overall satisfaction. Signage provides instant information to visitors. When visitors see a sign, they instantly receive the information that is related to what they see or where they are and it is not necessary for them to refer to their guide books or site maps. Hence, the physical conditions of the signage and the accuracy and quality of its information contents require regular maintenance and updating because they help visitors to carry out their activities safely and effectively. The findings demonstrate that first-time visitors' unfamiliarity with the site makes them rely more on the signage to provide them with directorial, administrative and interpretive information than the repeat visitors do. In other words, visitors' familiarity with the site not only affects their length of decision-making process but also their perceptions of the quality of the

facilities, that repeat visitors' decision-making process generally is shorter, and first-time visitors show lower perceptions with respect to the quality of the tourism facilities.

Moreover, more than 60% of the sampled visitors came to the New Forest with family members, and just over 11% of them came to the site with family and friends. Nearly 22% of the visitors came with their friends and/or colleagues. These figures reflect the marketing materials such as web pages, forestry holidays for camping and caravanning, guide books, site maps and holiday brochure of the New Forest. In such material, the New Forest is usually portrayed as ideal for family holidays. The historical significance of the site as a Royal hunting ground designated by the William I in the 11th Century, the on-going timber production and the practice of commoning also provides educational value to children as well as to adults. The tourism facilities are also managed and provided with the family in mind, for instance, picnic tables, fully equipped campsites, ice cream vans, pushchair and wheel chair accessible footpaths, and bicycle, tandem and the Burley Bicycle Trailer hire.

"Family and children" as the main market suggests that the unique landscape and heritage of the New Forest can be introduced to the younger generation during their visits to the site, giving them first hand and real experience. In other words, these young visitors can learn to appreciate the values of the site through their experiences and from educational programmes provided by the managing authorities. That is, young visitors' affective domain, value systems and emotions, towards the resources can be developed (Eiss and Harbeck , 1972; Iozzi, 1989), and they may be more likely to engage in environmentally friendly activities during their visits to the site.

8.2.2 The Effectiveness of Communication with Visitors

8.2.2.1 Visitors' awareness of the applied visitor codes in the New Forest

Visitor management strategies rely on effective communication between the site-managing authorities and the visitors - the directorial, regulatory, administrative and interpretive information needs to be channelled to the visitors. In other words, in order to evaluate the outcome of the visitor management strategies the initial step is to assess the visitors' awareness of the existence of these management techniques. There are numerous media that are used to communicate with visitors, such as site personnel, printed materials, audio-visual devices and signage. In the case of visitor codes, they are usually presented on signage and printed materials to communicate the information relating to the desired behaviour to visitors.

There are 9 visitor codes in the New Forest, two of them are widely presented: (1) the 40 mph speed limit and (2) animal feeding is prohibited. The findings show that repeat visitors are more aware of the existence of these visitor codes, and in general, those who visit the site more frequently have a higher awareness of the existence of the visitor codes. Local residents' awareness of the codes is significantly higher than that of the non-locals, and infrequent visitors' (those who visit the site less than once per annum) awareness of the visitor codes is significantly higher than of the first-time visitors. In short, visitors' familiarity with the site is also positively associated with their knowledge of the visitor codes.

However, looking into the repeat visitors' knowledge of the existence of the visitor codes, except for the two most noticeable ones, the code of "parking in designated car parks" was not known by as many as 77% of the repeat visitors. 45% and 40% of them were not aware of codes relating to "car park thieves" and "cycling on cycle tracks", respectively (See Table 7.18). This indicates that the communication of these codes to visitors has room for improvement. The codes directly associated with the management of the site, namely parking in designated car parks and do not park on the

road side, no lighting fires in the Forest, walking on footpaths and cycling on cycle tracks, no littering, and controlling pet dogs, should be made more noticeable to visitors. In contrast to the two well-known codes, the lesser known codes are placed at the associated locations and the size of signage is relatively small. For example, “dogs should be on lead”, “walking on footpaths and cycling on cycle tracks” are placed on the gates of tracks. Visitors may easily overlook this signage on gates because when they are undertaking outdoor activities, reading such small signs is not their priority.

The managing agency for the Crown Lands of the New Forest, the Forestry Commission, has limited manpower to patrol the site to safeguard the resources from inappropriate visitor use. Thus, visitors are left to self-administer their activities. In such instances, visitor codes are essential guidelines to inform and advise visitors what the desired behaviour is and how they can carry out outdoor activities safely and comfortably.

The fact that visitors are unaware of some of these codes suggests that there has been a failure in the communication process. In which case, the persuasive function of communication cannot be performed. These visitor codes are intended to raise visitors’ understanding of desired behaviour. In so doing, it is hoped that visitors will modify their behaviour to be more resource friendly voluntarily (visitor codes are not law-enforced). Since visitors are not aware of the codes, the communication process is in fact not successful, and the persuasive function of the codes cannot be executed. Hence, the frequency of appearance of these lesser-known codes should be increased in order to be noticed by visitors.

8.2.2.2 The functions of Tourist Information Centres in the New Forest

The staffed Tourist Information Centres and mobile Information Booths provide prompt, tailor made and personal services to visitors upon enquiry. The research findings indicate that repeat visitors are more aware of the existence of the Tourist Information Centres. However, the results show no significant differences between

repeat and first-time visitors' going to the Tourist Information Centres. During the survey, 79% of the first-time visitors had been to the Tourist Information Centres, and 75.5% of the repeat visitors had been there on the day when they were interviewed or during their previous visits to the site. Such findings suggest that a significant proportion of the visitors go to the Tourist Information Centres, although, repeat visitors seem to be less likely to go back there over and over again every time they visit the site.

First-time visitors are more likely to go to the Tourist Information Centres to look for specific information, as opposed to repeat visitors' main reason for going there is to browse around (See Table 7.25). In other words, repeat visitors' familiarity with the site also has an effect on their purpose for going to the Tourist Information Centres. Tourist Information Centres are ideal vehicles for providing the most up-to-date information with regards to recent changes in the site. For instance, a walk or cycle tracks that run through a timber inclosure is temporarily closed because of timber harvest or tree felling in the area. Such information is placed on bulletin boards in some of the larger car parks, in local newspapers and distributed to visitors by the staff in the Tourist Information Centres. Hence, it is possible that repeat visitors might not be aware of such temporary closures because they do not go to the Tourist Information Centres as they consider they are familiar with the site.

To counter such situations, the use of other media such as temporary signage and regularly updating the web sites, combined with encouraging visitors to use the web site, to inform visitors about the recent changes in the site is necessary. Also such information can be printed and distributed through local amenities such as pubs, accommodations, shops and commercial attractions. Referring to the earlier discussion that the frequencies of exposure of some of the visitor codes needs to be increased in order to increase visitors' knowledge of them, it appears that information of directorial, administrative and regulatory functions needs to be delivered more frequently to visitors. The majority of the visitors come to the site for recreational purposes, and repeat visitors are likely to visit the site on a mode of "auto-pilot".

Searching for regulatory and administrative information is not consisted in visitors' "to do" list. Therefore, in order to manage visitor flow and their use of the resources while ensuring safety and a high quality visit experience, such information needs to be readily available and noticeable.

8.2.2.3 Visitors' perceptions of the effectiveness of the media

Media play important roles in communicating with visitors in a tourism destination, and in some tourism sites, non-personal media are greatly relied upon to deliver information. The cost of employing and training staff is higher than posing signage or web sites. Media such as signage, printed materials and web pages although they require regular updating, have the advantage of serving a large number of people and being "on-duty" almost permanently. In contrast, personnel are comparatively more expensive. They can only be stationed in popular tourism honey-pots in order to serve as many visitors as possible and be cost-effective, the quality of service they offer varies from one individual to another, and their working hours are limited. However, well-trained and knowledgeable personnel can provide tailor-made services and information promptly upon request, which is usually welcomed by visitors.

The visitors show above average rating in their perceptions of the effectiveness of the media used in the New Forest to deliver welcoming, regulatory, administrative and interpretive information to visitors. Their perceptions towards signage, however, are lower than those of other types of media. With respect to the factors that contribute to effective communication, namely user friendly medium, easy understanding information, lively and dynamic information, sufficient information contents and easy accessibility to the medium, signage was not rated highly by the visitors (See Table 7.30). Referring to visitors' opinions about the physical conditions of the tourism facilities, they also show lower rating in their perceived conditions of signage (See Table 7.14). Their negative comments on the signage conditions include the fact that directorial road signs are not seen very often and some are positioned in awkward locations, contents too small a font and some signs have been vandalised and not yet

been mended. Signs are used by a large number of visitors in search of information, and a wide range of information can be delivered through signs. Visitors' low opinions of the physical condition of signage and its effectiveness in delivering information indicate that such a medium does not function efficiently.

Just 16% of the sampled visitors had been to the New Forest Museum, which suggests that the Museum may be underused. The entrance charges for their exhibitions and audio-visual programme may be one reason why visitors may be put off. Also, visitors are likely to miss out the Museum exhibitions and opt for exploring the New Forest because the site itself offers first-hand and real experiences of the features. Some personnel from the New Forest managing agencies are concerned that the Museum gives visitors a feeling of being old-fashioned and a not-so-friendly interior setting. A young girl recommended that the Museum should provide more hands-on exhibitions for children. In short, the Museum as a communication medium to deliver educational interpretive information to visitors fails to capture a large number of audiences. Improving the exhibitions with regards to their style (more interactive and hands-on) may be appealing to children. Furthermore, the audio-visual programmes and the exhibitions should include special features that visitors are less likely to see through their untrained eyes in order to attract them to come to the Museum.

First-time visitors demonstrate lower ratings in two of the media than repeat visitors: printed materials and signage. Repeat visitors' familiarity with the site helps them explore the site with ease. In contrast, first-time visitors are likely to be frustrated because they are in an unfamiliar environment and they might feel stressed simply for the reason that they have to look at a map and look for directorial signs in order to know where they are. Hence, first-time visitors tend to have lower opinions about these two types of media that are widely used by visitors in tourism destinations worldwide, and they seem to be more critical about the information contents, accuracy, delivery and user friendliness of a medium. On the other hand, there is no statistical difference between repeat and first-time visitors' opinions of the site personnel's effectiveness in providing them with information. This may be because, as

mentioned previously, site personnel can offer prompt and tailor-made information, and they have the advantage of showing warmth and welcoming to visitors during the face-to-face encounter, of which, other types of media cannot offer.

8.2.2.4 Visitors' preferences of media

The types of media available to deliver directorial, administrative and interpretive information in the context of tourism and visitor management have been increased as the technology has developed over the past few decades. Computerised programmes provide visitors with interactive opportunities to access to directorial and interpretive information, and the Internet enables visitors to plan routes, book accommodation, car hire and flights, investigate places to visit and activities to carry out, and enquire information via e-mail contact. However, printed material, directorial signs, interpretive panels and personnel remain the favoured media by the sampled visitors when they undertake tourism activity.

The visitors' approach to exploring a tourism destination may have an effect on their preference of media. Moreover, the accessibility of a particular type of media also influences people's use and preferences for them. Although the development of the computer and the Internet has progressed significantly in the last decade, access to the Internet is still limited, compared with people's access to a guidebook or signage. Also, the technology is not yet widespread or inexpensive enough to facilitate visitors carrying handhold devices during their exploration of a tourism destination and having remote wireless access to a web site. Hence, computer-related media are not available as all-round media for visitors to rely on. People's habits of information searching and their knowledge level also have influences on their preference of media. An individual who is not used to using computers is less likely to search for information on the Internet. Therefore, these high technology media may not appeal to a wide spectrum of audiences.

On the other hand, printed materials can be carried and used during visitors' exploration of a site, whether they are walking, cycling, having a picnic or fishing. On-site directorial and interpretive signs as well as personnel can assist printed materials to provide prompt and more updated information. They are widely available, especially the printed materials, and they may appeal to visitors as user-friendly because visitors can use them to look for information in their own pace. On the contrary, users of mass media programmes and audio-visual shows are "forced" to follow the programmes' speed, and the programme contents are designed to be general instead of being specific. The findings suggest that since signage is one of the preferred media, the managing authorities of the New Forest may consider improving the information contents, presentation and frequency of appearance of signage to deliver directorial and interpretive information.

8.2.2.5 The techniques used by the site managing agencies to control and channel visitor flows

Two main organisations administer the management and provision of tourism and recreation activities and facilities in the New Forest - the Forestry Commission and the New Forest District Council. They cooperate in the management of tourism and recreation at the site, for instance, publishing printed materials such as site maps and guidebooks, and providing and maintaining facilities (in the Crown Lands this is the Forestry Commission's responsibility). The managing agencies' principle of managing the New Forest is the New Forest resource as top priority and visitors' use comes second. Commercial activities such as timber production follows behind. Such management principles are issued clearly in the Minister's Mandate for the New Forest 1999-2008 (Forestry Commission, 2001a, 2001b; Goriup, 1999).

The New Forest District Council uses the technique of "concealing information" in their publication "the Official Map of the New Forest", that is, routes leading to sensitive areas where contact between people and resources should be restricted are not shown in the Map. There is concern that imposing regulations on access to these

areas is in fact likely to attract and arouse visitors' curiosity to explore those sites. Fencing those areas off may cause visitors' dissatisfaction. Hence, by not showing the directorial information of these routes in the Map, visitors are not given such information. Firstly, the contact between visitors and the sensitive resources can be limited, and because visitors are not made aware of the location and existence of these areas, they are less likely to feel disappointed resulting from refusal of entry.

The Forestry Commission uses physical alteration and resource hardening to manage and channel visitor flows. For instance, the cycle tracks are supposed to be a linked-up cycle network. It is not so currently because some sections of the network runs through sensitive areas where the Commission feels it necessary to direct visitors away, hence the network is broken into separate routes in order to protect resources. Car parks in the Crown Lands of the New Forest are also managed by the Forestry Commission. In the 60s New Forest resources suffered from uncontrolled vehicle access and parking. Since the designation of these 130 or so car parks, inappropriate parking has been greatly reduced. Furthermore, the Forestry Commission uses banks, ditches and dragon teeth (small poles) along some roads to prevent vehicle entering woodlands, and the size and locations of these car parks are regularly monitored and altered in order to control vehicle access to resource sensitive areas. For example, car parks that are too close to fragile resources may be reduced in size, or temporarily/permanently closed down in order to manage visitor flow. In other words, resource protection is the primary concern of the managing agencies that administer the provision of tourism and recreation, even though it means that on some occasions visitors' enjoyment needs to be compromised.

8.2.2.6 Visitors' perceptions of the current visitor management strategies in the New Forest

The visitor management techniques applied in the New Forest at present include the use of visitor codes, interpretation through printed materials, signage, the indoor exhibitions and audio-visual programme in the New Forest Museum, directorial

information provided via printed materials and signage, and physical hardening and alteration, including the construction of car parks, tracks, fences and temporary or permanent closure of some locations. A list of 8 issues relating to the visitor management strategies in the New Forest was surveyed with respect to the sampled visitors' perceptions of whether they need to be improved or implemented (See previous chapter 7.8.1 and Figure 7.11). The findings show that visitors feel that the interpretive signage should be improved with respect to its information contents. Furthermore, visitors would welcome more information on environmental issues about the New Forest and appropriate activities to undertake.

The result reflects Krippendorf's (1987) suggestion that visitors are willing to be informed about various aspects of the site. The majority of visitors do not want more regulations on activities to be imposed. Hence, combining information on the sensitivity and importance of resources as well as the appropriate and desired tourism activities to participate in to form part of the interpretation of the New Forest is crucial. Such interpretive information should be provided to visitors to enhance their understanding, and in turn, visitors are likely to acknowledge the importance of imposing regulations and hardening resources. In so doing, visitors are less likely to feel dissatisfaction resulting from the use of harsh and negative regulations, instead, because of their increased awareness they are more likely to observe and practise those applied visitor codes.

Referring to the earlier discussion of visitors' perceptions of the effectiveness of the media to deliver information to them, printed materials were used by a large proportion of the sampled visitors, and their perceptions of the printed materials were positive. Nevertheless, nearly 20% of the visitors also commented that they feel the information contents of the printed media need to be improved. Site-specific printed materials such as site maps, guidebooks and leaflets, need regular updating. Moreover, printed materials, as the medium used by most of the visitors, should play a more proactive role in delivering information to visitors. Except for directorial information, the environmental issues and the historical as well as ecological significance of the site

can also be included to provide visitors with a complete portrait of the New Forest. By communicating the features of the site, its past, present and future, to the visitors, visitors are more likely to feel that they are associated with the landscape of the New Forest. In turn, their sense of citizenship is likely to be aroused and they may be more likely to help protect the resources by modifying their behaviour to be more appropriate.

Again, visitors' familiarity with the site has an effect on their perceptions of the visitor management strategies in the New Forest. A smaller proportion of the repeat visitors considered the improvement on printed materials and interpretive information on signage to be necessary. The findings suggest that repeat visitors' familiarity with the site reduces their dependence on printed materials and interpretive signage. It is also possible that first-time visitors found the available information in printed materials and interpretive signage insufficient when compared with what they had received through these media in other tourism destinations.

The use of high technology media such as interactive computerised programmes was thought to be welcomed by visitors. However, over half of the samples do not think the introduction of a wider variety of media to deliver information to be necessary. Furthermore, referring to visitors' preferred media, the Internet and on-site computerised programmes were not favoured by many. The visitors who favoured the Internet tend to be younger (See Table 7.37). These results point out that although computer and the Internet seem to have penetrated to one's daily life, the actual proportion of people who rely on them may be quite small. The computers are mainly used for word processing such as producing school work and business reports, and the Internet is used for e-mailing. In other words, it is possible that many people are still not familiar with the functions of computerised programmes and the Internet. They may be reluctant to use the Internet to look for directorial information and book for attractions and/or accommodation for their holiday at a tourism site. The interactive computerised programmes in a tourist information centre might not be utilised fully because people think computers are not reliable and asking a staff will be quicker to

achieve what they need to know. Hence, printed materials, signage and personnel remain the favoured media when visitors undertake tourism activities, and more than half of the samples considered that the use of a wider variety of media to deliver information to them is not necessary.

8.2.3 The Possibility of Visitors' Behavioural Modification

8.2.3.1 Visitors' perceptions of the importance of information provision in a tourism site

Almost all of the sampled visitors thought the provision of information to them at a tourism destination is necessary, irrespective of their familiarity with the site. This demonstrates the importance of effective communication with visitors. Visitors are willing information receivers at a tourism site. In order to manage visitors effectively, it is necessary for site-managing authorities to select a combination of different media to deliver directorial, administrative/management related and interpretive information to visitors. Moreover, it is also essential to make such information widely available on site, because searching for interpretive or regulatory information might not be the priority of visitors' purpose of coming to the site. Instead, the managing agencies should take a proactive approach in making visitors aware of such information by increasing the frequency of exposure of such information and delivering it to visitors effectively.

8.2.3.2 Visitors' responses to the hypothetical question of whether they would be willing to pay for car parking in the Crown Lands in the New Forest

The sampled visitors were surveyed with respect to their willingness to pay for car parking in the Crown Lands in the research site. In 1999 when the survey was carried out, there were no car park charges in the Crown Lands, although visitors were encouraged to donate for the management of the New Forest resources. Car parking fees in the towns and villages of the New Forest District were subject to the charges

imposed by the local council. Because visitors are likely to explore the site instead of stationing at a particular location during their visits to the New Forest, the managing authority, the Forestry Commission, is unlikely to impose car park charges for each car park in the Crown Lands. Therefore, the visitors were surveyed to see whether they would be willing to pay for parking under the circumstances that the parking ticket is of day-ticket and transferable among the 130 car parks in the Crown Lands scheme.

Furthermore, although “users pay” is an acceptable principle by many people, it does not necessarily mean that they are all willing to pay for services and goods voluntarily. “Freebies” are often used in market place to promote new products and to encourage repeat or more consumption of a particular good or service. Also, the perceived value for money has a profound effect on whether people are willing to pay and how much they are prepared to pay for a product or service. In the research, visitors were asked whether they would be willing to pay for car parking when the financial gain from car parks is to be used for resource protection in the New Forest. Visitors come to the site to enjoy outdoor activities in the New Forest environment, in other words, the “New Forest” is a main factor that attracts people to visit. Hence, using the revenue from the car park charges as a condition not only to attempt to arouse visitors’ sense of citizenship but also to provide the economic incentive of “value for money”, that the resource protection will benefit from their involuntary financial contribution towards car parks.

Thus, the question is based on the conditions that the car park charges is based on the scheme of day-ticket and is transferable between the car parks in the Crown Lands, **and** that the financial income would be used to protect the sensitive resources in the site. Visitors were also surveyed with respect to their perceived acceptable daily car park charges in the Crown Lands.

Some 73% of the visitors stated that they would be willing to pay for car parking in the Crown Lands (See Figure 7.15). 59% of these visitors thought £3.00-£5.00/day car

park charges is acceptable, whilst 21% thought £6.00-£10.00/day reasonable, 15% would be willing to pay for £11.00-£15.00/day car park charges, and 6% were prepared to pay as much as £16.00 or more for a day for parking in the car parks in the Crown Lands of the New Forest (See Figure 7.18). Visitors' willingness to pay and their perceived acceptable car park charges could be affected by several factors.

The research findings do not show that higher visitor satisfaction is related to more willingness to pay for car parking. On the contrary, the few visitors who did not have a satisfying visit experience responded that they were willing to pay for car parking, but those who had satisfied and very satisfied experiences in the New Forest also showed a higher proportion of not being willing to pay for car parking. However, it is necessary to stress that less than 0.6% of the visitors claimed not had a satisfying visit to the site. In such instances, the dissatisfied visitors represented a small minority of the sample, the researcher does not feel comfortable to conclude that the relationship between visitors' satisfaction and their willingness to pay for car parking is inverse.

Other factors that have influences on willingness to pay for car parking and their perceived acceptable car park charges include the length of stay at the site (staying visitors versus excursionists), geographical origins, their familiarity with the site (repeat versus first-time visitors), the visit group composition, economic status and age.

A higher proportion of staying visitors showed willingness to pay for car parking. Since they come to the site for holidays, their expenditure is likely to be more than of the excursionists, and their length of stay in the site is longer, hence the notion of "users pay" has more appeal to them. However, because staying visitors have to make expenditures on food and drinks, accommodation and entrance charges to commercial attractions, their perceived acceptable daily car park charges are lower than the excursionists'. Most of the staying visitors thought £3.00-£5.00/day car park charges was acceptable and less than 10% of them would be willing to pay for £6.00-£10.00/day. However, a much higher proportion of the excursionists who would be

willing to pay for car parking considered that £6.00-£10.00/day fee was a reasonable car park charge in the Crown Lands in the New Forest. For excursionists, coming to the New Forest for recreational purposes is economical. There are few spending opportunities for them on the site, except for food and drink and entrance charges for commercial attractions, which is likely to be an one-off incident. Therefore, a smaller proportion of the excursionists would be willing to pay for car parking because they might consider that their length of stay in the site is short, hence paying for car parking may be thought as “not-so-value-for-money”. However, those who would be willing to pay, their threshold for daily car park charges in the Crown Lands is higher than their holidaying counterparts.

The findings also show that more than 75% of the New Forest District local residents would not be willing to pay for car parking in the Crown Lands of the New Forest, because they need to pay for high rate of council tax which entitles them one vehicle per household free of charge for parking in the towns and villages in the District. Also, it has always been free to use the parking facilities in the Crown Lands. Therefore, they are against the idea of paying for car parking. Moreover, the local residents' willingness to pay for car parking - or more accurately the lack of it, is likely to be resulted from another factor - their frequency of visit. They are likely to use the New Forest recreational purposes on a regular basis, even as often as several times per day (for instance, walking their pet dogs), although their length of stay at the site tends to be short. Therefore, paying for the car parks in the Crown Lands may become a financial burden. Coupled with their financial contribution in the form of council tax, it is not surprising that the most of the New Forest District residents in the sample opposed the car park charges. On the other hand, the majority of the visitors residing in Greater London would be willing to pay for car parking, in fact, some of them expressed surprise that parking is free at the site. Moreover, they are willing to pay higher daily car park fees - 25% of them thought £6.00-£10.00/day is reasonable car park charges, 22% accept £11.00-£15.00/day parking fees, and 15% of them would be willing to pay more than £16.00 daily parking charges.

Visitors from densely populated areas, such as Greater London and the South East of England, are used to paying relatively high parking fees in their home environment, and may expect to pay high parking fees even when they are away from their home environment. In cities and large towns, local authorities use high parking fees as a way of economic disincentive to “punish” those who want to use their private vehicle instead of public transport (a recent event of the charges for entering central London in private vehicle is a good example of this). In so doing, local authorities hope that the traffic flow can be controlled and the financial gain from the parking charges can be used for other purposes. However, as discussed in Chapter Three, the effect of punishment may be short-lived (Skinner, 1953, 1954, 1974). If an individual perceives the benefits, for instance, convenience, of using their own vehicle outweighs the financial burden of paying for car parking, they will continue driving their own cars. Since the available public transport to and around the New Forest is limited, visitors’ mode of transport is predominantly private cars. For those who reside and work in areas where car park charges are high, they may be not only willing to pay for parking in the Crown Lands, they also tend to expect to be charged a higher parking fees.

On the other hand, since there are few viable alternatives to using the private motor car as the primary means of transport to and around the New Forest, the site-managing authorities have monopoly power in determining the rates of car park charges, as the demands for this form of transport is quite inelastic. This means that high charges will yield high revenue for the authorities, but it will not function with respect to controlling the number of vehicles except where the rise in price chokes off some of the demand.

Furthermore, first-time visitors not only showed more willingness to pay for car parking, their perceived acceptable car park charges were also higher than the repeat visitors. In addition, the repeat visitors who frequent the site suggested that their deemed acceptable car park charges were lower, £3.00-£5.00/day. This may be because that they are likely to feel that the more often they come to the site, the more they would have to spend if the car park charges are at a higher rate. In contrast, first-

time visitors showed a higher willingness to spend more on car parking, because they are not familiar with the site and their excitement and/or enjoyment from visiting the New Forest may overcome their sense of monetary expenditure.

Referring to the Theory of Reasoned Action suggested by Ajzen and Fishbein (1980), the subjective norm can have an effect on an individual's intention to carry out a particular behaviour. Subjective norm is derived from one's beliefs that specific referent(s) consider particular behaviour should or should not be carried out and the individual's motivation to comply with the referent(s). In the case of New Forest visitors, those who come to the site with their friends/colleagues showed a higher proportion with a willingness to pay for car parking in the Crown Lands in the New Forest. This is likely to be because "pay and display" is considered "politically correct" behaviour, and those who visit the New Forest with their friends/colleagues may feel pressured to comply with their peers in the group as they want to establish their image before them. On the other hand, visitors who came to the site with organised party are more likely to remain anonymous, that is, they are less likely to be motivated to comply with their fellow group members, because they are not considered significant referents. Hence, visitors in organised party may feel more freely to express their true feelings towards the hypothetical car park charges - the results show lower proportion of the visitors came to the site with organised party would be willing to pay for car parking.

Combining the Theory of Reasoned Action (Ajzen and Fishbein, 1980) and Bandura's cognitive observational learning (Hergenhahn, 1982), the reason that visitors who come to the site with friends/colleagues are more willing to pay for car parking is clear. They perceive the significant referent(s) would "pay and display" in car parks, this pressures and motivates them to comply with the significant referent(s), that is observational learning and behaviour performance based on this individual's cognitive thinking.

Last but not least, the visitors' age and economic status also seem to influence their willingness to pay for car parking and their perceived acceptable daily parking fees. Visitors who were in full-time paid job showed more willingness to pay for car parking, and their perceived acceptable daily car parking fees tend to be higher than other visitors who are not in full-time jobs. This may be considered quite natural since the perceived costs will be much higher for those not in gainful employment.

Although nearly three-quarters of the sampled visitors replied that they would be willing to pay for car parking in the New Forest, 26% of the samples disapproved of the car park charges in the New Forest. Many tourism destinations including national parks and the New Forest may be considered as a public asset and the general public should be allowed free access to them. However, minimal control on access and uses of these perceived public commodities is likely to lead to inevitable damage on the resources. Site-managing authorities should communicate effectively with visitors to make them aware that the imposed regulations, restrictions, charges for facilities and other management techniques aim to provide visitors with safety, comfort and enjoyable experiences during their visits to the site while protecting and managing the resources for long-time tourism development. Through such communication, visitors' understanding of the values of the site and the purposes of controlling their activities are likely to be enhanced. In other words, a combination of hard and soft visitor management strategies such as economic methods, resource hardening and alteration, the application of restrictions, visitor codes and interpretation is crucial to manage the resources as well as the visitors effectively.

8.2.3.3 Visitors' potential of behavioural modification after their receiving relevant information

If visitors were given further information relating to the impacts upon resources resulting from improper visitor use, and they showed intention to adapt their behaviour to be more appropriate, such research findings imply two important issues relating to the use of visitor management. Firstly, communication with visitors is necessary

because it increases visitors' knowledge of the site, including what to do and where to go in the area, the features and their values, and the desired behaviour/activities to be carried out at the destination. Moreover, such research results also point out that interwoven specific information relating to visitors' impacts on resources and what they can do to prevent the loss or the degradation of the resources in the communication messages would be beneficial to the management and protection of a tourism destination.

Visitors were asked if they were given more information with regards to the negative impacts caused by inappropriate visitor use and activities and what actions they can take to help protect the resources, whether they would modify their behaviour/activities to be more appropriate, make use/adopt the suggested actions/activities, both modify and adopt where possible, or still remain as they were. The findings show that a surprisingly high - 30% of visitors would have no intention to modify their current behaviour or to adopt the recommend ones after receiving such information, while the remaining visitors showed intentions to modify their behaviour.

Such results were further tested against their willingness to pay for car parking in the Crown Lands as an indicator to demonstrate their intentions to modify their current behaviour/activities. The results show that those visitors who indicated that they had no intention to modify or to adopt recommended actions also reveal less willingness to pay for car parking in the Crown Lands of the New Forest (See Table 7.48). In contrast, those visitors who demonstrated intentions to alter their current behaviour/activities show more willingness to pay for car parking. In other words, there is a positive link between visitors' receiving information and their behaviour modification. These differences may be explained by the lack of value placed on the resources from one group compared with another.

It is necessary to point out that the information provided to visitors should focus on how to generate their intention to carry out desired behaviour. That is, information should be relevant to visitors' concern. They come to a tourism site to have safe,

comfortable and enjoyable experiences, and the majority of them would not want to damage the resources deliberately. Hence, making visitors aware of the potential threat on sensitive resources resulting from their inappropriate activities is necessary. However, information of where to go and what to do is not sufficient to arouse their formation of intention to engage in more desired behaviour. Persuasive communication of messages relating to animal feeding, temporary or permanent closure of some car parks, why visitors should stay on walks and cycle tracks, why visitors are charged for parking and what the financial income could benefit the resource protection, is more likely to provide visitors with the insight into the outcomes of their behaviour. For example, a leaflet of a child being injured caused by their trying to get closer to the wild ponies is a more powerful and more persuasive message of the danger of feeding or touching wildlife than merely a signage of “animal feeding is prohibited” on the roadside. A photograph of the aftermath of an uncontrolled fire in the New Forest is more effective to point out the consequences of lighting a campfire or barbecue fire outside the designated areas. That is, the reasons of the “dos” and “don’ts” should be made clear to the visitors, or they are less likely to take notice of the regulations or visitor codes. Such information is relevant to visitors’ experiences, safety and comfort in the site. Delivering such information to visitors is more likely to successfully persuade them to adapt their behaviour to be more appropriate.

In addition, such information also explains the underlying principle of the application of hard visitor management strategies. Hence, although visitors may not willingly comply with these hard visitor management strategies, their understanding of the values of the site and the management effort may be enhanced from the provision of information. On the other hand, except for relying on regulations, restriction and other hard visitor management strategies such as resource alteration and hardening, providing alternatives to replace visitor experience is also necessary. For instance, if the Forestry Commission wants visitors to stay away from sensitive areas and closes down those car parks adjacent to those sites, it is important to provide information to divert visitor flow to other areas to visit rather than merely turning them away. Other

forms of alternatives include discounted charges for car parking during off-season/off-hour, discounted or free local transport if visitors use park-and-ride scheme, and providing information relating to resource protection benefited from visitors' donation or payments for using facilities. They are also incentives that can persuade visitors to pay for car parking or to encourage them to use public transport to visit the site. Also, interpretation of the sensitive resources that visitors are not able to experience can be provided in the forms of exhibitions, guided activities, audio-visual programmes and other types of media

In short, two factors are involved in altering visitors' inappropriate behaviour and encouraging them to adopt appropriate behaviour - information and alternatives. Visitors should be made aware of the relevant information with respect to what to do and what not to do, at when and where, and why. Furthermore, alternatives should be provided to replace that what the visitors might think the "lost experience". Applying total restrictions on visitor flow and activities is less likely to increase their understanding of the values of the site. Instead, visitors should be diverted to areas where are suitable to sustain tourism development for the long term. Information of directions and interpretation should also be provided to enable visitors to experience the resources while increasing their knowledge of the sensitivity of the resources that attracted them to visit the site. Where resources are too sensitive to have direct encounter with visitors, interpretation is also an ideal way to enable visitors to indirectly experience those resources through the use of media. Therefore, it is clear that successful visitor management relies on the balanced use of a combination of hard and soft techniques to safeguard the resources and visitors' safety, comfort and high level of visit experiences.

8.3 RECOMMENDATION FOR FUTURE RESEARCH

The research of the New Forest is of questionnaire-based survey type, intending to explore an overall view of the implementation of visitor management in the research site and visitors' perceptions of such management, and the potential of persuasive

communication with respect to its ability to modify visitors' behaviour on site. The researcher hopes the research findings can provide useful suggestions to managing agencies of resource-based destinations relating to the planning and implementation of visitor management techniques. The use of regulations, zoning, resource alteration, visitor codes, charging for the use of facilities and interpretation is commonly seen in tourism sites. However, the effectiveness of each of these methods varies and is dependent on the complementary use of other visitor management techniques to maximise the overall management outcome.

The researcher felt that in order to identify the results of the implementation of visitor management in a tourism destination, it would be valuable to design an experimental-style research to explore the effective combination of the various visitor management approaches for further research. For instance, in sites where visitors are required to walk on the designated walks/tracks (which is a form of resource hardening), using controlled and experimental visitors groups to investigate whether visitors would welcome the trail-side interpretive panels or they would prefer a single information board placed at the beginning of the walk would be useful to understand visitors' preference relating to centralised or dispersed interpretation. Moreover, wanting to investigate the effectiveness of communication of trail-side signs as well as other signage, setting up an experiment that question visitors just after they had passed these signs to see if they really notice the existence of signs and if they read the signs whether the information is registered in their memory. In terms of visitors' preference of media, such experimental-style of research can also be used to investigate visitors' uses and perceptions of the media. For example, although computerised on-site programme and the Internet is not favoured by the sampled visitors, introducing such form of media in one of the Tourist Information Centres would provide information about the visitors' usage and perceptions of such medium. Such medium may be highly welcomed by visitors once it is placed in a Tourist Information Centre.

Additionally, in this study, the researcher questioned whether visitors would be willing to pay for car parking based on two assumptions: (1) it is day-ticket and transferable

between the car parks in the Crown Lands of the New Forest; (2), the generated revenue would be used for resource protection. For future study, it would be interesting to investigate further by comparing visitors' willingness to pay for car parking with and without the second assumption.

8.4 FINAL REMARKS

Communication with visitors is central to successful visitor management - it makes visitors aware of visitor management techniques. Persuasive communication aims to achieve the objectives of the communication, gaining compliance from the message receivers (Burgoon et al, 1994). In the case of visitor management, the objectives of persuasive communication with visitors are to ensure that visitors not only have safe and enjoyable experiences but also their behaviour can be modified to be more appropriate during their visit to the site.

Referring to the review of literature, information provided to visitors in fact reflects Festinger's (1957) concept of dissonance, consonance and irrelevance and Piaget's (Hergenhahn, 1982) process of equilibrium seeking and accommodation/assimilation. In a tourism site, visitors enjoy and interact with the resources. By providing relevant information relating to the negative impacts resulting from improper visitor use, it is likely to cause cognitive development with respect to "resources are sensitive and require protection" and "there are activities/behaviour that I should not carry out in order to help protect the resources". Furthermore, such information also increases visitors' knowledge, action skills and touches their affective domain (Hines et al, 1986/1987; Hungerford and Volk, 1990; Iozzi, 1989).

Effective communication with visitors ensures visitors have safe, comfortable and high level of visit experiences. Persuasive messages that are well selected, planned and presented also increase visitors' understanding of the purposes of controlling their flows on site and the values of resources. On the other hand, the use of hard visitor management strategies, including resource alteration and hardening, economic

incentives and disincentives, and law-enforced restrictions and regulations can achieve direct and immediate result of controlling visitors. They ensure the resources are not damaged by visitors' deliberate or unintentional inappropriate behaviour. Harsh toned regulations and other hard visitor management strategies need to be balanced by information of why visitors should and should not undertake particular behaviour/activity. When visitors' flow or activities are restricted, they should be made aware of other available alternatives and the reasons of the application of such restrictions. In other words, hard and soft visitor management methods function in a supportive way, that hard visitor management techniques force visitors to alter the inappropriate behaviour during their visits to the site, while soft visitor management methods facilitate visitors to comply with these regulations by increasing their understanding of the sensitivity of the resources and sense of citizenship, and providing alternative way of experience the site where possible (for instance, use media to provide interpretation).

Through effective communication of such relevant information with visitors, visitors are likely to observe and practise and abide to the regulations and restrictions. Meanwhile their enjoyment is ensured because they are able to experience the high quality of tourism resources and to carry out tourism activities at more robust areas where tourism development can be sustained. Moreover, the use of interpretation can compensate the negative feelings resulting from the hard visitor management strategies, and visitors may be willing to adopt desired behaviour when they are given the information and alternatives. To conclude, a balanced combination of hard and soft techniques is required to ensure success in managing visitors in tourism destinations, because these two types of techniques compensate the shortage of each other and intensify their benefits.

To the site managing agencies of the New Forest, the findings suggest that the frequency of exposure to some of the visitor codes need to be increased in order to strengthen visitors' awareness of the appropriate activities/behaviour. Moreover, the managing agencies may wish to reduce the occurrence of some improper visitor

activities such as speeding and animal feeding with law enforcement. With respect to the media used to communicate various information with visitors, the research results suggest that signage is one of the favoured types, and there were negative comments towards the current maintenance and provision of signage in the site. Furthermore, information that is capable to stimulate visitors' willingness to engage in desired behaviour/activities may be introduced and communicated with visitors through a combination of media, especially the three favoured ones, namely printed materials, site staff and signage. In so doing, the current visitor management techniques practised in the site can therefore be strengthened to help protect the sensitive resources in the New Forest.

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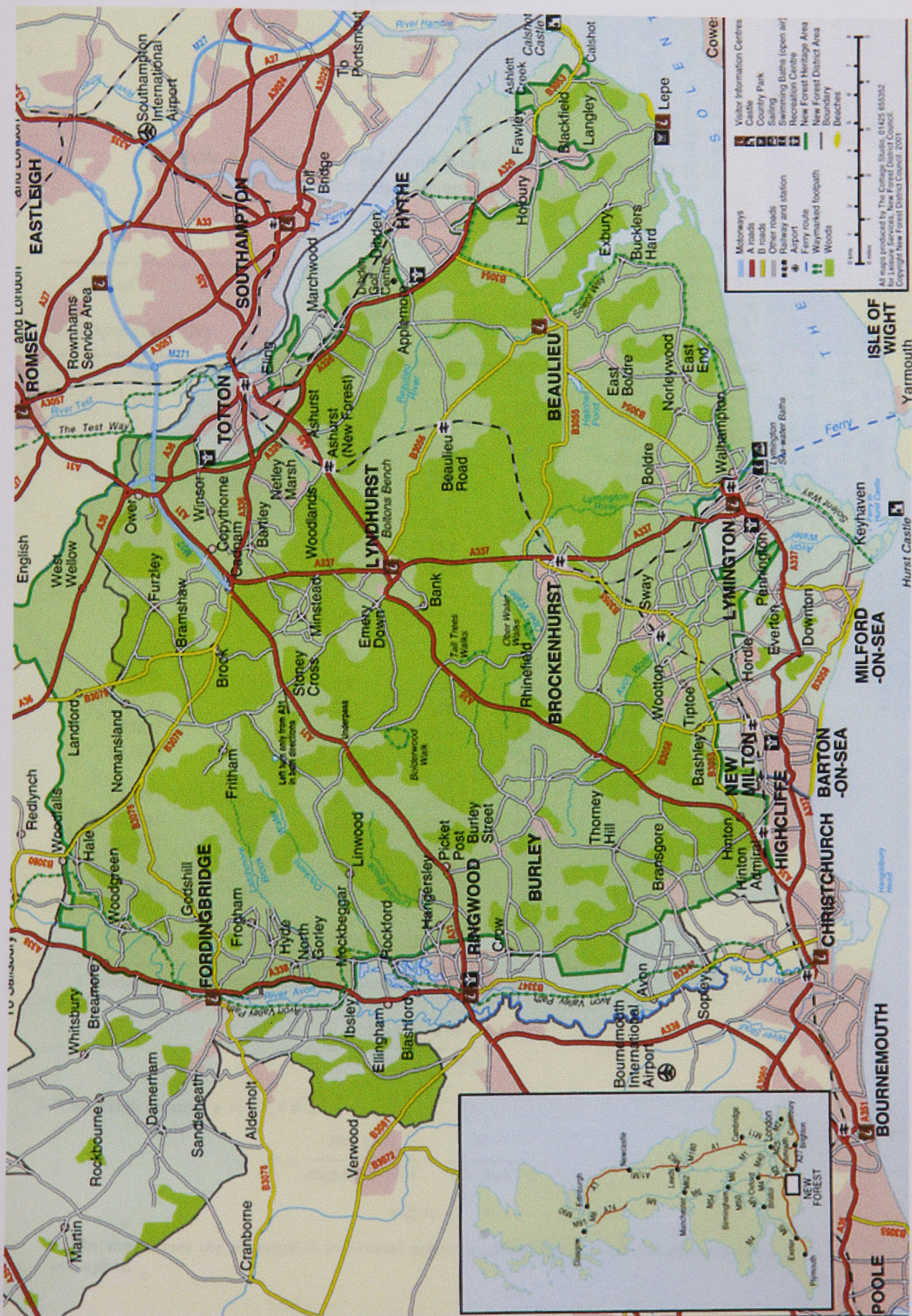
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APPENDICES

Appendix A

The New Forest



Appendix B

Sample Size for Specified Confidence Limits and Precision When Sampling Attributes in Percent

A. 2σ Confidence Interval
($\pi = 0.5$)^a

Size of Population (<i>N</i>)	Sample Size (<i>n</i>) for Precision (<i>e</i>) of					
	±1%	±2%	±3%	±4%	±5%	±10%
500	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	222	83
1,000	<i>b</i>	<i>b</i>	<i>b</i>	385	286	91
1,500	<i>b</i>	<i>b</i>	638	441	316	94
2,000	<i>b</i>	<i>b</i>	714	476	333	95
2,500	<i>b</i>	1,250	769	500	345	96
3,000	<i>b</i>	1,364	811	517	353	97
3,500	<i>b</i>	1,458	843	530	359	97
4,000	<i>b</i>	1,538	870	541	364	98
4,500	<i>b</i>	1,607	891	549	367	98
5,000	<i>b</i>	1,667	909	556	370	98
6,000	<i>b</i>	1,765	938	566	375	98
7,000	<i>b</i>	1,842	959	574	378	99
8,000	<i>b</i>	1,905	976	580	381	99
9,000	<i>b</i>	1,957	989	584	383	99
10,000	5,000	2,000	1,000	588	385	99
15,000	6,000	2,143	1,034	600	390	99
20,000	6,667	2,222	1,053	606	392	100
25,000	7,143	2,273	1,064	610	394	100
50,000	8,333	2,381	1,087	617	397	100
100,000	9,091	2,439	1,099	621	398	100
→ ∞	10,000	2,500	1,111	625	400	100

^a Formula for sample size when population proportion is π is

$$n_0 = \frac{z^2 \pi (1 - \pi) N}{z^2 \pi (1 - \pi) + Ne^2}$$

This table assumes $\pi = 0.5$, $z = 2$:

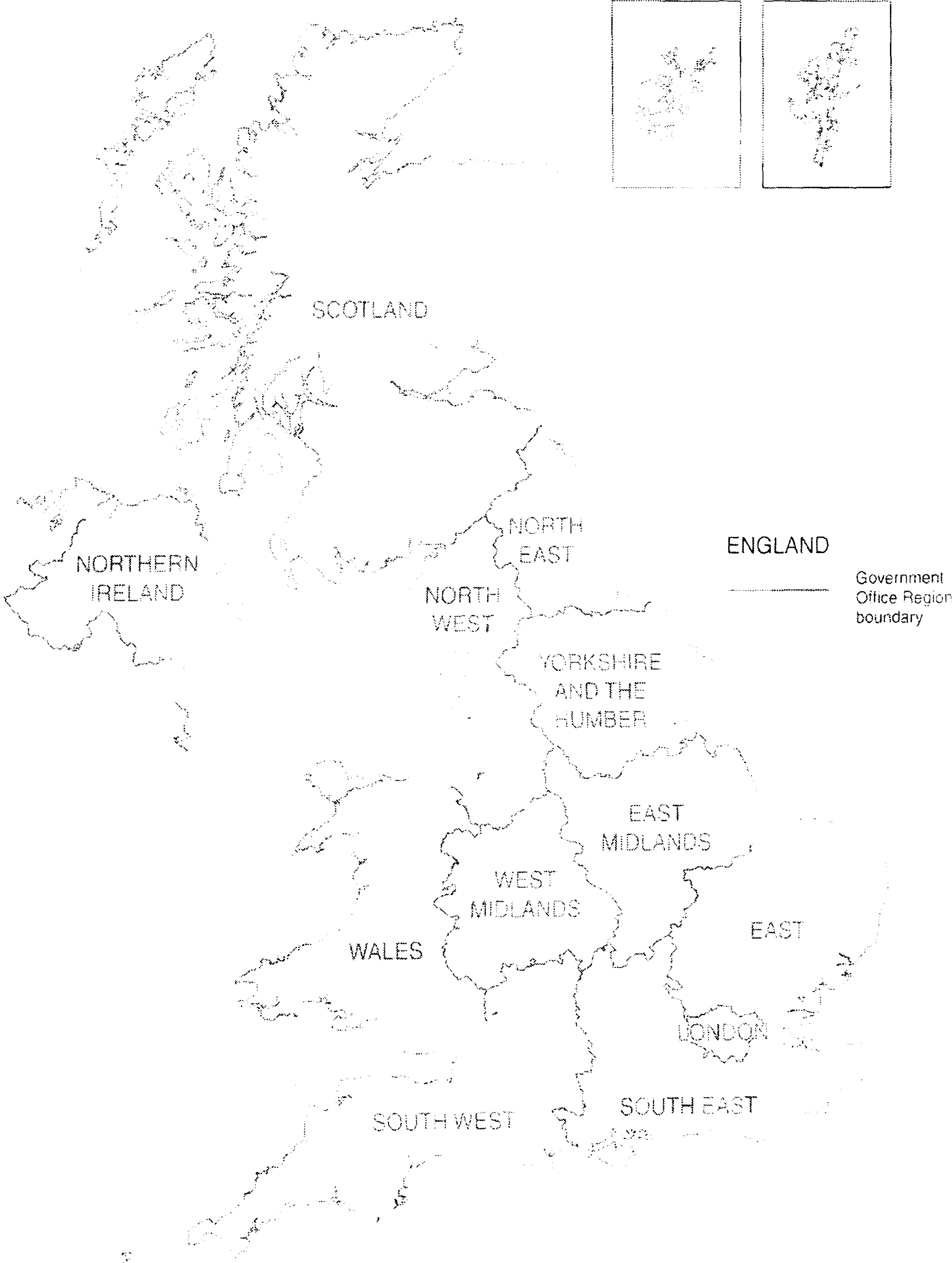
$$n = \frac{2^2(0.5)^2 N}{2^2(0.5)^2 + Ne^2} = \frac{N}{1 + Ne^2}$$

$$n \geq n_0$$

^b In these cases the assumption of normal approximation is poor, and the formula does not apply.

Appendix C

Statistical Regions of the UK



Appendix D

Questionnaire of the New Forest Visitor Survey

International Centre

for Tourism & Hospitality Research

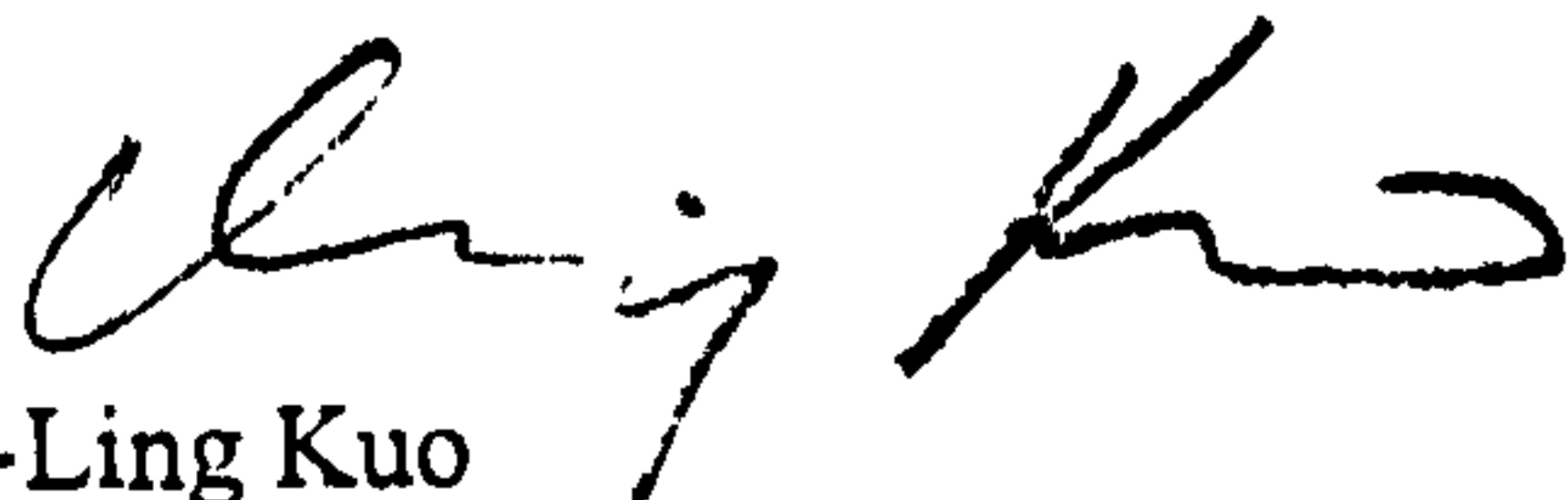
New Forest Visitor Survey

Dear Visitor

The purpose of this survey is to explore the relationship between the information provided regarding the New Forest and the effectiveness both as a source of information and as a means of influencing the behaviour of visitors to the Forest. The results will assist the New Forest District Council in its management of the Forest and also help the Council to enhance the visitors' experience.

All information you provide will be treated confidential and for research use only.

Thank you for your cooperation.



I-Ling Kuo

PhD Researcher

International Centre for Tourism and Hospitality Research

Bournemouth University

Location/Site _____

Date & Time _____



1. What was the purpose of your visit to the New Forest?

- En route to my final destination
- For holiday

Will you stay in the New Forest overnight? Yes (i) / No (ii)

i. If "yes", how long will you stay?

- ❖ Two days, one night
- ❖ Three days, two nights
- ❖ Four days, three nights
- ❖ More than four days

ia. Where will you stay?

- ❖ Hotel
- ❖ Bed & Breakfast
- ❖ Self-catering flat/house
- ❖ Holiday park
- ❖ Campsite
- ❖ At friend's/relative's
- ❖ Other. Please specify

ii. If "no", how long will you stay in the New Forest?

- ❖ Half a day
- ❖ The whole day, then return home/continue my journey
- ❖ Please specify where your final destination is _____

- Just a day out/recreation
- To visit a commercial attraction. Please specify
- To have a meal/drink
- To shop
- I have a special interest(s) in the New Forest. Please specify _____
- Other. Please specify _____

2. When did you arrive in the Forest? (time and date) _____

3. Is this your first visit? Yes / No (i & ii)

i. If "no", how often do you come to the New Forest?

- ❖ More than 10 times/year, regularly
- ❖ More than 6 times but less than 10 time a year
- ❖ More than 3 times but less than 5 times a year
- ❖ 1-2 times a year
- ❖ Less than one visit a year, not frequent

ii. What is your reason for repeating your visit to the New Forest today?

- ❖ For recreational purposes
- ❖ Because I like the New Forest
- ❖ Visiting family or friends
- ❖ Carrying out special interest activities
- ❖ I live locally/I am NFD local resident
- ❖ It is easy/convenient to come here
- ❖ I just passed by/through the area earlier
- ❖ Other. Please specify _____

4. How did you know about the New Forest as a tourism destination?

- From the printed media, e.g. newspaper, magazines, books, etc.
- From a TV or radio tourism programme.
- Word of mouth
- Your local Tourist Information Centre/Holiday Brochure
- I passed by/through this area before
- I always know
- Other. Please specify _____

5. When did you decide to come to the New Forest?

- Today
- Yesterday
- This week
- More than a week ago
- More than a month ago
- More than 6 months ago

6. Have you enjoyed your visit to the Forest? Yes/No

If "no", why not? _____

7. Please rank the following aspects of your visit where appropriate.

• **ACTIVITIES**

❖ **Walking**

Least enjoyable	Not very enjoyable	Average	Enjoyable	Very Enjoyable
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Do you think walking is “environmentally friendly” activity to the New Forest environment?

Very unfriendly	Fairly unfriendly	Average	Friendly	Very Friendly
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Cycling**

Least enjoyable	Not very enjoyable	Average	Enjoyable	Very Enjoyable
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Do you think cycling is “environmentally friendly” activity to the New Forest environment?

Very unfriendly	Fairly unfriendly	Average	Friendly	Very Friendly
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Having a picnic**

Least enjoyable	Not very enjoyable	Average	Enjoyable	Very Enjoyable
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Do you think having a picnic is “environmentally friendly” to the New Forest environment?

Very unfriendly	Fairly unfriendly	Average	Friendly	Very Friendly
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Horse riding**

Least enjoyable	Not very enjoyable	Average	Enjoyable	Very Enjoyable
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Do you think horse riding is “environmentally friendly” activity to the New Forest environment?

Very unfriendly	Fairly unfriendly	Average	Friendly	Very Friendly
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Driving around**

Least enjoyable	Not very enjoyable	Average	Enjoyable	Very Enjoyable
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Do you think driving around is “environmentally friendly” to the Forest’s environment?

Very unfriendly	Fairly unfriendly	Average	Friendly	Very Friendly
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• **NATURAL SCENERY**

Very bad quality	Bad quality	Average	High quality	Very high quality
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• **TOURISM SUPPORTING FACILITIES**

❖ **Car park**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Accommodation**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Roads in the New Forest**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Footpaths/Cycle tracks**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Sign posts**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Tourist Information Centres**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ **Toilets**

Very bad condition	Bad condition	Average	Good condition	Very good condition
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Would you please tell me the key messages that you are aware of:

- Road: Speed limit 40 mph
- Access: walking on footpath or track in order to reduce disturbance to wildlife
- Parking: parking in car parks instead of parking on roadside
- Cycling: Cycle on tracks, give way to walkers and horse riders, speed control
- Dogs: Pets should be on lead and under control
- Fire: No picnic or camp fires. BBQ sites Provided by the Forest Commission can be booked.
- Litter: Litter should be placed in bins or taken home
- Car Park Thieves: Lock car and take valuables with you
- Do not approach/feed the animals

9. Do you agree that the key messages that you know of make you more aware of the environmental issues relating to the New Forest resources?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Please rank your overall satisfaction of your visit.

Very Unsatisfied	Fairly Unsatisfied	Average	Satisfied	Very Satisfied
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Were you aware that there were Tourist Information Centres before you arrived at the New Forest? Yes/No

12. Have you been to any of the Tourist Information Centres in the New Forest? Yes/No
If "yes", please answer question 13.

13. Did you come to the Centre to ask for specific information (1) or just to have a look around (2)

14. How effective are the following in delivering information to you at the site?

- **Printed media**, such as holiday brochures, leaflets, maps, and guide books etc.

Very Poor	Poor	Average	Good	Very Good
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- ❖ What do you think about the characteristics of the printed media? Please rank from 1 (the least) to 5 (the most).

- User friendly medium
- Easy understanding information in the printed media
- Lively and dynamic medium
- Ample information in the printed media
- Highly accessible

- **Staff in the Tourist Information Centres**

Very Poor	Poor	Average	Good	Very Good
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- ❖ What do you think about the characteristics of staff in the TIC? Please rank from 1 (the least) to 5 (the most).

- Friendly and welcoming personnel
- Easy understanding information they provided
- Lively and dynamic
- They provided ample information
- Highly reachable

- **Indoor displays**

Very Poor	Poor	Average	Good	Very Good
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- ❖ What do you think about the characteristics of the indoor displays in the New Forest Museum? Please rank from 1 (the least) to 5 (the most).

- User friendly medium
- Easy understanding information
- Lively and dynamic displays
- They provided ample information
- Highly accessible

- **Signage**

Very Poor	Poor	Average	Good	Very Good
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ What do you think about the characteristics of the signage? Please rank from 1 (the least) to 5 (the most).

- User friendly medium
- Easy understanding information
- Lively and dynamic medium
- They provided ample information
- Highly visible

- **Mass Media**, e.g. TV and radio programmes.

Very Poor	Poor	Average	Good	Very Good
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

❖ What do you think about the characteristics of the mass media? Please rank from 1 (the least) to 5 (the most).

- User friendly medium
- Easy understanding information in the mass media programmes
- Lively and dynamic programmes
- They provided ample information
- Highly available

15. Please rank the following information media in order of your preference.

- Printed media
- Interpretive panels along footpaths/cycle tracks
- Site personnel, guided activities
- Exhibitions, displays
- Audio-visual programmes
- Directorial signs
- Mass media (TV and radio programmes)
- The Internet
- Interactive computerised programmes
- Other. Please specify

16. Do you think it is necessary to improve any of the information relating to the management of the New Forest?

- Introduction of more regulations on the activities in the New Forest
- Improvement of the information contents on printed media
- Improvement of the information contents on interpretive signs and bulletin boards
- Provision of more variety of media to deliver information
- Improvement of the indoor exhibitions in the New Forest Museum
- Improvement of directorial information relating to walks, cycle, tracks, facilities and attractions
- Provision of more information about environmental issues relating to the New Forest
- Provision of more information about appropriate activities to carry out in the New Forest

17. Do you think it is necessary to provide visitors with information at a tourism site?

No need at all	Not very necessary	Neutral	Necessary	Very necessary
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Are you willing to pay for car parking in the New Forest if the money was used for resource management and conservation?

- Yes/No
- And what is your perceived acceptable car park charge in the New Forest?

£3.00- £5.00/day	£6.00- £10.00/day	£11.00- £15.00/day	More than £16.00/day	I am not willing to pay
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. If the New Forest District Council and the Forestry Commission provided more information with respect to the Forest's environmental problems together with information regarding appropriate tourist activities, would you:

- Modify your existing activities to be more appropriate
- Make use of those suggested activities
- I would try to modify my inappropriate behaviour and adopt the suggested activities, depending on where applicable
- None, I have no intention to change my behaviour

20. Your demographic information

• **Gender**

- ❖ Male
- ❖ Female

• **Age**

- ❖ Under 15
- ❖ 15-25
- ❖ 26-40
- ❖ 41-60
- ❖ Over 60

• **Economic status**

- ❖ In full-time paid work
- ❖ In part-time paid work
- ❖ Full-time home or child care
- ❖ Full-time education
- ❖ Retired
- ❖ Unemployed or looking for paid employment
- ❖ Other, please specify _____

• **Where do you live? (county)** _____

• **Household composition**

- ❖ Single
- ❖ Couple
- ❖ Single with children
- ❖ Couple with children
- ❖ Other. Please specify

• **Visitor group classification**

- ❖ How many people are there in your group, including yourself
 - 2-5
 - 6-10
 - 11-15
 - More than 16
 - I am on my own

❖ Please specify your group composition

- Family group
- Friends/colleagues
- Family and friends
- Organised party
- Other. Please specify _____

• **What method of transportation did you use to get here?**

- ❖ Private motor vehicle
- ❖ Caravan/campervan
- ❖ Coach
- ❖ Bus
- ❖ Train
- ❖ Walk
- ❖ Bicycle
- ❖ Motorbike
- ❖ Other. Please specify _____

Thank you very much for your help!!