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Visitor satisfaction, loyalty and protected areas: a review and the future

Report prepared for
WA Department of Environment and Conservation, Parks
Victoria and the Parks Forum

Kate Rodger,¹ Susan A. Moore^{1*} & Ross Taplin²

¹School of Environmental Science, Murdoch University, South Street, Murdoch
WA 6150 AUSTRALIA

²School of Accounting, Curtin Business School, Curtin University of Technology,
Kent St, Bentley 6102 AUSTRALIA

*S.Moore@murdoch.edu.au

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Executive summary

Managers of protected areas have the difficult task of protecting and conserving natural areas whilst facilitating tourism and the associated benefits for visitors. Understanding visitors, and the quality of their experiences, is becoming increasingly important. Visitors are an important source of revenue for protected area management as well as providing much-needed societal support for such areas and their management agencies. Visitor satisfaction has been widely used as a measure of performance by managers.

Although satisfaction provides important insights into visitors' experiences, it provides little information regarding visitor's intentions post-visit. It is the behaviours predicted by these intentions that are important for managers: will visitors return, will they recommend the park (or park system) to others, will they volunteer their time, are they willing to pay (increased) park fees? This is the information needed by managers in times of declining budgets, fiscal uncertainties and increasing accountability requirements.

The aim of this review is to assist protected area managers to move beyond satisfaction to measuring and understanding the intended behaviours of visitors and hence their loyalty. Moving beyond satisfaction requires: (1) an understanding of visitor satisfaction and service quality and their influences on loyalty; (2) definitions and measurement of visitor loyalty; and (3) research and performance reporting on loyalty. These three points are the focus of this review.

The review findings include:

1. It is time for protected area managers to move beyond measuring visitor satisfaction. Managers require information on visitors' intended behaviour post-visit (i.e., loyalty) as a critical part¹ of determining the success or otherwise of their management.
2. Further research is required in:
 - a. Obtaining a better understanding of visitor loyalty behaviours and how to measure them. Measuring intention to re-visit and recommend to others is a valuable start but may not capture the full suite of behavioural intentions and may not apply to all protected areas. For example, 'once in a lifetime' parks may only ever be visited once and as such intention to re-visit is an irrelevant measure. Recent research has identified volunteering, advocacy and financial support as important behavioural intentions for investigation.
 - b. Obtaining a better understanding of the influences, in addition to service quality and satisfaction, on visitor loyalty. Modelling shows that service quality is partly but not solely responsible for loyalty (and satisfaction). Current research on the benefits obtained by visitors from visiting protected areas is looking promising in helping to better explain what contributes to loyalty. The challenge with benefits is to identify what managers can manage to enhance their achievement.
 - c. Determining whether improving the quality of services and facilities (e.g., clean toilets, friendly staff) results in more loyal visitors. Research over the last decade strongly suggests a relationship between the two. No research has deliberately intervened in protected area management, however, to enhance one or more aspects of service quality (e.g., having friendly staff present vs absent) and then measured the effects on loyalty. Such interventions are needed if firm conclusions are to be drawn about the effect of improving services and facilities on loyalty.

¹ Other critical parts include measuring the impacts of visitors on the natural environment and determining the benefits (including financial ones) to park agencies and the community accrued from visits. These are not covered in this review.

Contents

- 1. Introduction 1
 - 1.1 Aim of this review 1
- 2. Satisfaction 1
 - 2.1 Defining satisfaction 1
 - 2.2 Visitor satisfaction and protected area management 2
 - 2.3 Measuring visitor satisfaction 3
- 3. Service quality 5
 - 3.1 Defining service quality 5
 - 3.2 Service quality and protected area management 5
 - 3.3 Measuring service quality 6
 - 3.4 Importance-performance analysis 7
- 4. Future behavioural intentions and loyalty 8
 - 4.1 Defining behavioural intentions and loyalty 8
 - 4.2 Loyalty and protected area management 10
 - 4.3 Measuring loyalty 10
 - 4.4 Relationships between loyalty (behavioural intentions), satisfaction and service quality 10
- 5. Future opportunities and research needs 16
 - 5.1 Moving beyond measuring and reporting overall satisfaction 16
 - 5.2 Obtaining a better understanding of loyalty behaviours and measuring them 16
 - 5.3 Obtaining a better understanding of the influences on visitor loyalty 17
 - 5.4 Service quality and its influence on loyalty 17
- 6. Acknowledgements 18
- 7. References 18

1. Introduction

This review is one of a series of products from the ARC Linkage Project LP100200014 (2011-2013) 'Promoting and managing national parks into the 21st century'. Industry partners are WA Department of Environment and Conservation, Parks Victoria and the Parks Forum. The purpose of this review is to give protected area managers simple, straightforward access to the latest research and thinking regarding visitor satisfaction and loyalty, especially as they apply to their parks and reserves. Both concepts derive from marketing and more recently tourism research, with the confusion there regarding how they are defined, measured and distinguished from each other accompanying their recent movement into protected area management.

Most protected areas have a dual mandate of protecting the natural environment and providing opportunities for visitors. In 2009 there were 3.3 million international nature² visitors to Australia and over 12 million domestic overnight nature visitors (DRET & TRA, 2010). Determining and measuring the outcomes of these visits are essential data for today's protected areas managers. This review focuses on those outcomes related to visitor loyalty, outcomes such as intention to re-visit, recommend the park (or park system) to others, paying park fees, and volunteering time to work in or for protected areas.

Although satisfaction provides important insights into visitors' experiences, it provides little information regarding visitor loyalty. Loyalty matters as it generates income through repeat and new visitors and builds societal and hence political support for protected areas. Such political support is essential for ongoing public funding of protected areas. This is the information needed by managers in times of declining budgets, fiscal uncertainties and increasing accountability requirements. Even if satisfaction is an accurate surrogate for loyalty in the sense that they are statistically correlated, providing information in terms of loyalty explicitly rather than a generic outcome such as 'satisfaction' is essential as managers negotiate politically for funding and prestige. Visitors are viewed here as an asset rather than a liability (Weaver & Lawton, 2011; Manning, 2011).

1.1 Aim of this review

The aim of this review is to assist protected area managers to move beyond satisfaction to measuring and understanding the intended behaviours of visitors and hence their loyalty. Moving beyond satisfaction requires: (1) an understanding of visitor satisfaction and service quality and their influences on loyalty; (2) definitions and measurement of visitor loyalty; and (3) research and performance reporting on loyalty. These three points form the basis of the following review.

2. Satisfaction

2.1 Defining satisfaction

Visitor satisfaction has been variously defined, with definitions coalescing around the concept of *satisfaction as a measure of a visitor's emotional state after experiencing a destination* (Baker & Crompton, 2000) (Table 1). The evaluation is of experiences, rather than service outputs, and is a psychological outcome for the visitor (Crompton & Love, 1995; Tonge & Moore, 2007; del Bosque & San Martin, 2008; Moore & Walker, 2008; Zabkar et al., 2010). It is regarded as a subjective variable when compared to service quality (Lee et al., 2004).

² Nature visitor is a domestic or international visitor who participated in a nature activity while travelling in Australia. Activities include: visiting national park or state park; visiting wildlife park; visiting botanical gardens, zoos and aquaria; bushwalking or rainforest walks; whale/dolphin watching; snorkeling; and scuba diving (DRET & TRA, 2010).

Table 1. Central concepts in understanding the satisfaction and loyalty of nature-based tourists

Concept	Widely-used interpretation	Comments
1. Satisfaction	Visitor's emotional state after experiencing a destination	Long history of confusion and overlap with service quality
<i>1a. Overall satisfaction</i>	As per definition above for satisfaction	Widely measured and reported on by those managing destinations for nature-based tourism
<i>1b. Quality of experience</i>	Perceived benefits from the experience	An area of active research; currently being operationalised and measured as benefits (e.g., nature appreciation, escape, physical fitness)
2. Service quality	Perceived quality of performance of attributes (e.g., friendliness of staff, washroom cleanliness) at a destination	Popular to measure as the majority of attributes readily respond to management
<i>2a. Overall service quality</i>	Overall quality of performance at destination	Rarely if ever operationalised and measured; performance of individual attributes of much greater interest (i.e., 2b)
<i>2b. Quality of performance</i>	As per the above definition for service quality, but for specific attributes	Widely measured and reported on by those managing destinations for nature-based tourism; often reported as 'satisfaction' with attributes resulting in further confusion between service quality and satisfaction
3. Post-visit behavioural intentions	Person's stated intention to perform a behaviour after visiting a destination	Most often measured as intention to revisit and recommend the destination to others
4. Loyalty	Commitment to a brand, place or destination	Behavioural intentions provide a means for measuring loyalty

(Parasuraman, 1985; Crompton & Love, 1995; Baker & Crompton, 2000; Tian-Cole et al., 2002; Tian-Cole & Crompton, 2003; Lee et al., 2004; Driver, 2008; Weaver & Lawton, 2011)

While this broad, all-encompassing definition of satisfaction has the advantage of capturing a high level concept, it is also problematic because different mechanisms will operate on different aspects of satisfaction in different circumstances. Oliver (2010) discusses at length many aspects influencing satisfaction including: needs (need fulfillment); excellence (resulting in quality); sacrifice (resulting in value); expectations; and missed events (regrets). For example, visitor satisfaction may be determined by expectations by the visitor prior to the visit or opportunity costs associated with what the visitor may have done if they had not visited as much as anything managers can control in the visited area. This multi-faceted characteristic of satisfaction makes interpretation by managers problematic, especially since 'satisfaction' may evoke different meanings in different areas or by different visitors.

2.2 Visitor satisfaction and protected area management

Visitor satisfaction has been of great interest in protected area management for at least the last decade, based on the premise that high visitor satisfaction contributes to increased visitor numbers,

positive word of mouth and political support. Visitor numbers are widely used as a means of reporting on the success or otherwise of visitor management in protected areas (Griffin et al., 2010). It follows that if increasing satisfaction increases visitor numbers then enhancing satisfaction is an essential component of successful management.

Examples of published satisfaction research in protected areas include visitors to a wildlife refuge (Tian-Cole et al., 2002), and to national parks in New Zealand (Ryan & Cessford, 2003), Florida (Fletcher & Fletcher, 2003), Tanzania (Wade & Eagles, 2003), Dadia–Lefkimi–Souflion National Park in Greece (Arabatzis & Grigoroudis, 2010), Yanchep National Park in Western Australia (Tonge et al., 2011) and Dandenong Ranges National Park in Victoria, Australia (Ramkissoon et al., 2012). Applications to marine protected areas are limited. Tonge and Moore’s (2007) study of visitors to the Swan River Estuary Marine Park in Western Australia is an exception. Much of this protected area research focuses on the contributions of service quality (Section 3 below) to satisfaction.

Measuring and reporting on visitor satisfaction has been part of protected area management activities by a number of park agencies over the last decade (e.g., USDA Forest Service, Metsahallitus [Finland], and WA Department of Environment and Conservation and Parks Victoria [Australia]).³ A number of park agencies in Australia (e.g., WA DEC, PV) and elsewhere use satisfaction as a metric in corporate performance reporting. For example, WA DEC includes ‘% satisfied visitors’ as a key performance indicator in their annual departmental reports to the WA Parliament.

2.3 Measuring visitor satisfaction

Overall satisfaction

Efforts have been made by researchers working in protected areas to differentiate two levels of satisfaction (Tian-Cole et al., 2002). The first of these is *overall satisfaction*, which is a visitor’s emotional state after experiencing a destination. The second is *the quality of the experience*, which is the extent of benefits gained from transactions at a destination (Table 1, Figure 1). The most effective framework for representing and measuring visitor experiences continues, however, to be questioned (Dorfman, 1979; Zabkar et al., 2009). Although Tian-Cole et al. (2002) included quality of experience/benefits within the broad concept of satisfaction, other researchers have taken a simpler approach and referred to this variable as ‘benefits’ (e.g., Nowacki, 2009).

In recent years overall satisfaction has become an important variable for protected area managers, with a variety of methods and measures used (Tonge & Moore, 2007). The common, simple approach to measuring visitor satisfaction is asking visitors about overall satisfaction e.g., ‘How satisfied are you with your visit?’. Another approach is to regard overall satisfaction as a construct and collect information on a number of items that together describe it. For example, WA DEC ask visitors ‘How did you feel about your visit today?’ and ‘How would you rate your visit overall?’ to collectively measure overall satisfaction.

³ This list is illustrative not comprehensive.

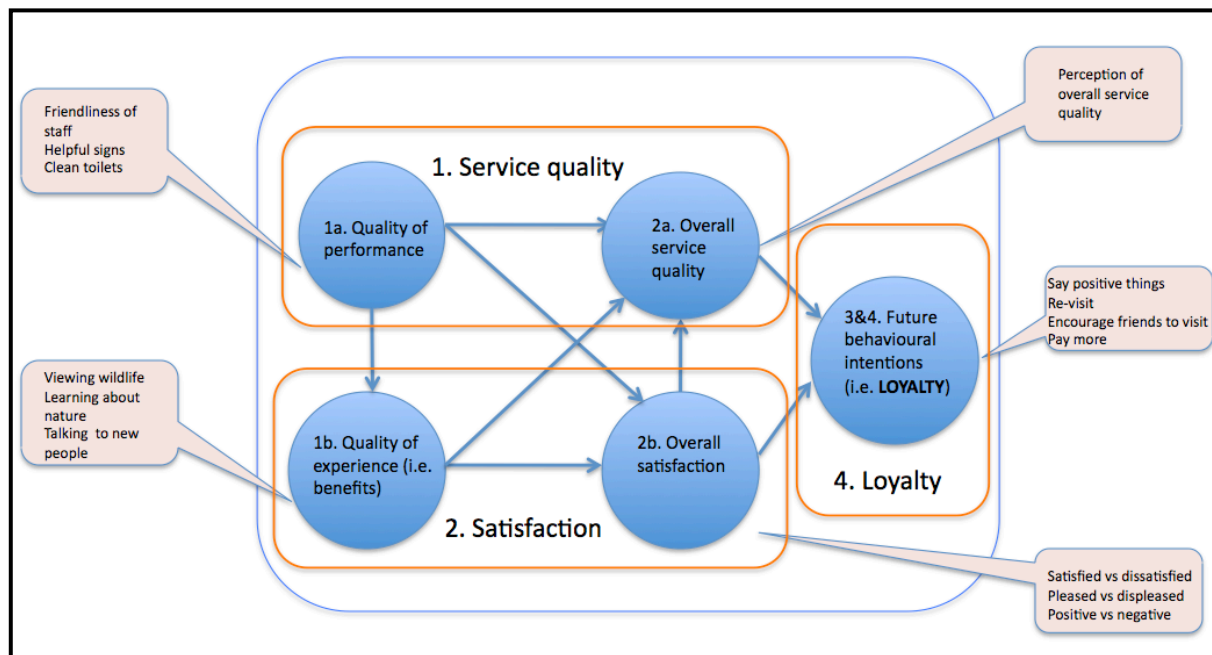


Figure 1. Relationships between satisfaction, service quality and behavioural intentions/loyalty for visitors to a protected area (Tian-Cole et al., 2002) [Numbers as given in Table 1]

Quality of experience/benefits

Benefits (quality of experience; Figure 1) are regarded as additional/complementary to service quality in explaining what contributes to overall satisfaction, and hence to loyalty. An issue for researchers and managers alike has been understanding what else, apart from service quality, contributes to overall satisfaction. The appeal of service quality is that it includes attributes (i.e., facilities and services) that are amenable to management. Unfortunately it only partially predicts satisfaction and there are clearly other influences at play. Benefits are one of these other influences, encapsulated in Figure 1 as 'quality of experience'. Others include things beyond managers' control such as the weather and nuisance insects (such as flies in Australia).

In their study of visitors to a wildlife refuge, Tian-Cole et al. (2002) adapted attributes from the Recreational Experience Preference (REP) scales developed by Manfredro et al. (1996). Their analysed experiences were nature appreciation/learning, achievement, introspection/nostalgia, escape, physical fitness, and new people. More recently Nowacki (2009), in her study of tourist attractions in Poland, focused on recreational, educational and social benefits including introspection, knowledge, escape, spending time with family, and watching animals. Frochot and Morrison (2001) noted the need for benefits to reflect the specific nature of the destination.

Benefits-Based Management (BBM), also known as the Benefits Approach to Leisure and the Net Benefits Approach, also relies on the experiential focus of the REP scales (e.g., Driver et al., 1991; Driver, 1996, 2008). BBM aims to determine the benefits desired from public lands (including protected areas) and then report on the extent to which these benefits have been achieved (McCool et al. 2007; Newsome et al., 2013). Using a benefits approach enables reporting on the beneficial outcomes from the recreational experience. A recent study of visitors to Kakadu National Park, Australia (Crilley et al., 2012) showed that the benefits attained by visitors were a strong predictor of an overall positive response to the Park. Their results suggest that managers of protected areas could usefully give greater attention to the benefits people desire from their experiences as a way to increase visitors' overall satisfaction.

Although this approach has been used in several countries including Australia, New Zealand and Canada (Anderson et al., 2000) it has not been without criticism. The main concern is the lack of knowledge regarding how managers can facilitate visitors' desired benefits. Meta-analyses of visitor

segments have helped overcome this concern through coupling visitor type and benefits (Frochot and Morrison, 2001; Jang et al., 2002; Li et al., 2009), as well as the expectations of these segments regarding service quality.

3. Service quality

3.1 Defining service quality

Similarly to satisfaction, service quality has a multitude of definitions. Baker and Compton (2000, 786) in their informative review note that the 'lack of consensus on conceptualization of the two constructs⁴ [satisfaction and service quality] has resulted in confusion to the point where the two constructs are frequently used interchangeably'. Oliver (1980) made a similar comment. Similarly to satisfaction, numerous researchers have highlighted the difficulties in clearly defining 'quality' (Crompton & Love, 1995; Tian-Cole & Crompton, 2003). It is generally agreed, however, that *service quality* focuses on the quality of performance based on the appraisal of attributes by visitors, as customers (Parasuraman, 1985; Baker & Crompton, 2000; Tian-Cole et al., 2002; Tian-Cole & Crompton, 2003; Zabkar et al., 2009) (Table 1). These attributes can include service delivery (e.g., staff interactions with visitors, interpretation) and facilities (e.g., toilets, roads, signs).

Another major contributor to confusion is researchers and managers wording service quality questions (e.g., questions about clean toilets, friendly staff) as satisfaction questions, especially asking how satisfied visitors are with a particular facility or service. In reality, the interest is visitors' perceptions of the performance of various attributes, that is, their perceptions of service quality.

The importance of service quality, as an aspiration and being able to measure customer's perceptions of it, has become more important as the services industry has played an increasingly important role in developed economies (Crompton et al., 1991; Cronin et al., 2000). Service quality relates to visitors' judgements/attitudes about attributes primarily controlled by a supplier (Parasuraman, 1985; Baker & Crompton, 2000). As such, visitors' perceptions of service quality have been of great interest to managers because this control makes these attributes potentially amenable to management and hence improvement (Crompton & Love, 1995; Baker & Crompton, 2000).

3.2 Service quality and protected area management

All of the examples given above (in section 2.2) of published satisfaction research from protected areas (e.g., Tian-Cole et al., 2002; Fletcher & Fletcher, 2003; Ryan & Cessford, 2003; Wade and Eagles, 2003; Tonge & Moore, 2007; Arabatzis & Grigoroudis, 2010; Tonge et al., 2011; Ramkissoon et al., 2012) rely on measuring service quality. To determine service quality visitors are asked for their perceptions of the performance of facilities such as toilets, signposts, walk trails and car parks and services such as the friendliness of staff and guided tours (e.g., Ryan & Cessford, 2003; Tonge & Moore, 2007; Arabatzis & Grigoroudis, 2010). In a number of these studies visitors were asked if they were 'satisfied' with these attributes. The intention was, however, to obtain visitors' perceptions of how the attributes of interest were performing, that is, an interest in service quality.

Questions about perceptions of service quality are central to many visitor surveys conducted by protected area agencies. For example, the USDA Forest Service (USDA Forest Service, 2012) asks a list of questions including the perceived performance (asked as 'satisfaction with') of restroom cleanliness, employee helpfulness and interpretive displays. Parks Victoria uses 36 service performance variables with data obtained from visitors to a suite of parks regarded as being representative of park visitors through out the state (Zanon, 2005a; 2005b).

⁴ A construct is an explanatory variable that is not directly observable.

3.3 Measuring service quality

Overall service quality

Service quality, similarly to satisfaction, has been conceptualized and measured at two levels – overall and for attributes of a destination (Figure 1). **Overall service quality refers to the overall quality of performance at a destination.** It is rarely operationalised and measured. Similarly to global satisfaction, it has both cognitive and affective components. Visitor judgements on overall service quality are determined by cognitive (evaluative judgments such as comparing perceived costs and benefits related to a service) and affective components (emotional judgments such as weighing up positive and negative feelings) (Tian-Cole & Crompton, 2003).

When it has been measured, this has been achieved using a single question, asking visitors for their perceptions regarding overall quality using a 10-point scale from extremely low to extremely high (Tian-Cole et al., 2002). No other studies of visitors to protected areas have included this construct, probably because researchers and managers alike are most interested in the performance of individual service quality attributes and what these contribute to enhancing satisfaction and to understanding and enhancing loyalty, the latter being a more recent interest. It has been included, however, in other tourism and marketing research.

Quality of (attribute) performance

Quality of performance is visitors' judgments regarding the performance of the individual attributes at a destination (Table 1). As discussed previously, these attributes encompass both services and facilities. Tian-Cole and Compton (2003, 76) importantly note that 'Perceptions of service quality are derived from cognitive beliefs about the destination's attributes'. As such, the quality of attribute performance is cognitively based while quality of experience/benefits is a psychological outcome or emotional response to a destination, and is therefore affective in nature (Tian-Cole & Compton, 2003).

SERVQUAL is an instrument, developed in marketing in the mid 1980s (Parasuraman, 1985) for application in the retail industry, which has been widely applied to measuring transactional service quality. It evaluates five service dimensions – reliability, assurance, empathy, responsiveness and tangible assets. The SERVQUAL model looks at the gap between perception of service and expectation of service, that is, service quality increases as a customer's perception of quality begins to exceed expectation of quality.

Many researchers in the parks and recreation field have adopted the SERVQUAL conceptualization, if not the instrument itself (Lee et al., 2004). Concerns continue to be raised regarding its focus on tangible outputs whilst largely ignoring intangible ones, which are central elements to many types of tourism (Crompton & Love, 1995). This issue continues to be addressed by the ongoing search for other variables that help better explain satisfaction and loyalty, such as benefits. Also for tourism research, service quality scales need to reflect the unique aspects of each place being studied (Zabkar et al., 2009).

An intriguing and potentially promising area of research is categorizing attributes as 'satisfiers' or 'dissatisfiers' (Baker & Crompton, 2000; Tonge & Moore, 2007). Satisfiers satisfy, excite and motivate. Baker and Compton (2000) refer to these as 'entertainment features' of the destination. For protected areas, these could be guided tours, interaction with wildlife and/or friendly staff. Dissatisfiers include toilets, signage and walk tracks (Griffin & Archer, 2001; Ryan & Cessford, 2003; Wade & Eagles, 2003). Dissatisfiers have limited satisfying consequences when fulfilled but evoke negative responses when they do not meet visitor needs and expectations (Tonge & Moore, 2007). The challenge for protected area managers is to identify and manage attributes that are satisfiers as these are most likely to obtain improved satisfaction and loyalty through an enriched visitor experience. The risk with dissatisfiers is that enormous amounts of resources may be expended with

visitors showing little evidence of greatly enhanced satisfaction; rather they become less dissatisfied or neutral.

3.4 Importance-performance analysis

Importance-performance analysis (IPA) provides a simple way to visually represent the relative performance of individual service quality attributes in a two-dimensional grid (Martilla & James, 1977; Oh, 2001) (Figure 2). In protected area research and management, and IPA more generally, importance rather than expectations are measured, although confusingly these two terms have been used interchangeably (Oh, 2001). Taplin (2012) provides clarity by noting that expectations must be measured prior to a visit whereas importance can and should be measured during or after a visit. Thus, it is practical and feasible to measure importance. And, it provides the information needed to undertake IPA.

IPA provides a useful method for visually displaying the importance visitors assign to specific attributes as well as their judgments regarding the performance of these attributes (Wade & Eagles, 2003; Tonge & Moore, 2007). This in turn allows managers easy interpretation of results to identify where performance is good or alternatively management attention might be needed. A number of researchers and protected area agencies (e.g., Tonge & Moore, 2007; USDA Forest Service, 2012) have added more experiential attributes (e.g., presence of wildlife, scenery) as well as those encapsulating purely service quality (e.g., toilets, staff) to importance-performance analyses.

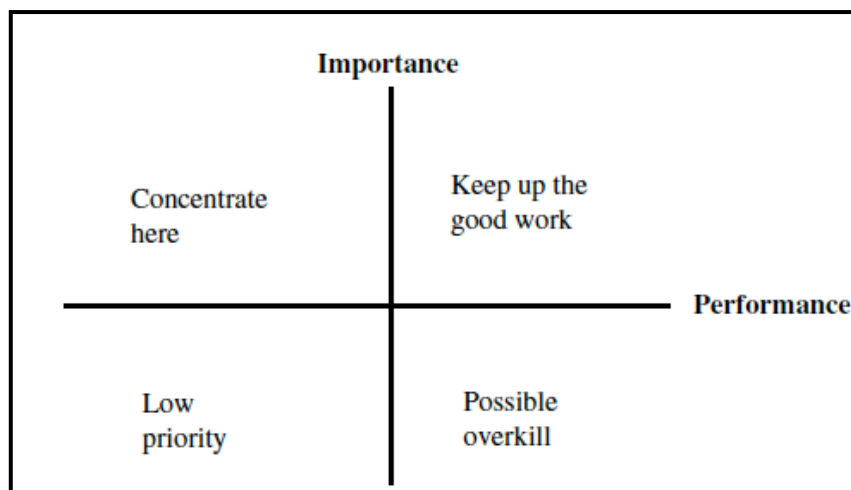


Figure 2. Importance-performance grid (Oh, 2001)

IPA has been applied in tourism research, evaluating hotel and restaurant services and facilities and guided tours. It has also been applied in protected areas for assessment as well as management purposes (Oh, 2001; Wade & Eagles, 2003; Tonge & Moore, 2007; Tonge et al., 2011). Evaluations have included visitor information centres, accommodation and campsites (Arabazis & Grigoroudis, 2010). Tonge and Moore (2007) reconceptualised IPA to importance-satisfaction analysis (ISA) and applied it to a marine park and its hinterland in Western Australia. They interchanged the use of 'satisfaction' with 'performance' to highlight the experiential, and hence satisfaction-linked, aspects of recreation and tourism activities in protected areas.

Within the two-dimensional grid importance is placed on the vertical axis and performance on the horizontal axis (Figure 2). The measures for each are obtained from visitor surveys where respondents are asked to indicate (usually on a 5, 7 or 9 point scale) how important an attribute is to them, and how they perceive it has performed. These results for the attributes are then plotted onto the two-dimensional grid. Vertical and horizontal lines (crosshairs) divide the plot into four quadrants. The combined importance-performance score for each attribute determines its quadrant. The quadrant – 'keep up the good work' – includes attributes with high importance and performance. The quadrant titled 'possible overkill' includes attributes with low importance but high

performance. The 'low priority' quadrant is where attributes have low importance and performance. The last quadrant – 'concentrate here' – has attributes with high importance but low performance and hence are the attributes that management should investigate for improvement.

Locating the crosshairs has been subject to ongoing debate. Three approaches are evident from research to-date: using the mean values of the scales to place the crosshairs (i.e., 3 on a 5-point scale); placing them at the mean values of the self-reported importance and performance scores (most common); and placing the crosshairs at a pre-selected number (e.g., selecting 4 to indicate high expectations by managers regarding performance when a 5-point Likert scale was used) (Oh, 2001; Wade & Eagles, 2003; Tonge et al., 2011).

Where the crosshairs are placed matters, especially if managers are considering moving limited resources between attributes (Taplin, 2012). If they are placed in the middle of the measurement scale, most attributes are likely to lie in the 'keep up the good work' quadrant, which is not particularly useful for managers in determining management priorities. Locating the crosshairs at the means ensures approximately half of the attributes lie above and half below (and to the left and right) of the crosshairs, clearly illustrating and differentiating the relatively higher and lower performing attributes. Using a manager-determined standard to place the crosshairs (e.g., 4 on a 5-point scale) means managers can determine for themselves the boundary between well- and poor-performing attributes. In their study of visitors to an Australian marine park and its hinterland, Tonge and Moore (2007) found that the results obtained from placing the crosshairs at 4 (when using a 5-point scale) aligned most closely with those obtained from a gap analysis, another useful approach to assessing attribute performance.

Gap analysis is similar to IPA in its reliance on the means of importance and performance. A gap score is obtained by subtracting the importance mean from the performance mean. A statistical test (usually a t-test) is undertaken to determine if the gap is significant. A positive gap results when the performance is higher than the importance value, indicating no management is required. Conversely, a negative gap indicates that the importance value is higher than the performance value, with action by managers needed to improve performance (Tonge et al., 2011). Gap analysis is equivalent to IPA however the plot in Figure 1 is divided into two regions defined by the diagonal line from bottom left to top right (where importance = performance) rather than four quadrants (Taplin, 2012).

4. Future behavioural intentions and loyalty

4.1 Defining behavioural intentions and loyalty

In an ideal world, we would be able to determine and measure how visiting a protected area influences visitors' behaviour, especially regarding their support (or otherwise) for that area or protected areas more generally. Unfortunately this is not practically possible, rather researchers focus on respondents' behavioral intentions. *Behavioral intention* is a person's stated intention to perform a behaviour (Table 1). The Theory of Reasoned Action (Ajzen & Fishbein, 1980) posits that the intention to perform a behaviour is a direct determinant of actual behaviour. Thus, a high level of intentionality regarding a particular behaviour reflects a high level of motivation to actually perform it. Such intentions are seen as better indicators of future behaviour if they are specific in action, time and place (Baker & Crompton, 2000). Behavioural intentions of interest that have been measured for visitors to protected areas are listed in Table 2.

Table 2. Items used to measure the behavioural intentions of visitors to protected areas (Tian-Cole et al., 2002; Lee et al., 2004; Weaver & Lawton, 2011)

1. Say positive things about the destination to others
2. Recommend the destination to others
3. Intention to re-visit
4. Willingness to pay a higher entrance fee
5. Willingness to donate money to managing the area
6. Willingness to write to politicians regarding potential threats to the destination
7. Willingness to volunteer time to working at the destination
8. Willingness to volunteer time to protected areas more generally

An interest in behavioural intentions has been clearly evident in the tourism literature since the appearance of Baker and Crompton's (2000) oft-cited paper *Quality, satisfaction and behavioral intentions* in the *Annals of Tourism Research*. Until recently, the focus has been on measuring points 1-4 in Table 2. The behavioural intentions covered by points 5-8 in Table 2 have only recently appeared in behavioural intentions research for protected areas, with Weaver and Lawton's (2011) survey of visitors to a protected area in South Carolina embracing both on- and off-site behavioural intentions.

The intentions listed towards the bottom of Table 2 generally require more commitment from visitors than the earlier listed ones (Tonge et al., in prep.). For example, volunteering requires a greater commitment than saying positive things. Weaver and Lawton (2011) describe this progression down the list as moving from 'convenient' to 'inconvenient' behaviours (or from lower to higher investment actions) and Ramkissoon et al. (2012) describe it as moving from low to high effort behaviours.

Points 5-8 in Table 2 overlap with actions identified as part of more general research efforts into *pro-environmental behaviours*: actions undertaken by individuals or groups either promoting or resulting in the sustainable use of natural resources (Halpenny, 2010). In this review, consideration of such pro-environmental behaviours is restricted to those associated with a visit to a protected area and where subsequent behaviours are of direct benefit to such areas. For example, intentions to recycle or use public transport are not of central interest to this review. Repeat visitation, positive referrals and activism supporting protected areas (e.g., volunteering) have been described as part of a 'virtuous cycle of sustainable people-park symbiosis', where such a cycle contributes to parks being supported and sustained by society (Weaver & Lawton, 2011).

As with this whole area of satisfaction and service quality, issues abound regarding the overlaps and differences between behavioural intentions and loyalty. Over the last decade, there has been a drift from using the term 'behavioural intentions' to cover the items listed in Table 1 to using the term 'loyalty'. Recent research on visitors to protected areas and ecotourism uses the latter rather than the former term (e.g., Rivera & Croes, 2010; Weaver & Lawton, 2011). Perhaps the simplest way to understand the relationship between the two is to regard behavioural intentions as a means for measuring visitor loyalty (Table 1).

Visitor loyalty is a commitment to a brand, place or destination (Baker & Crompton, 2000) (Table 1). It is a practical, easily understood term to which managers can easily relate. As such, we use this term (with the acknowledgment of its shared history and purpose with behavioural intentions) in the remainder of this review. In the marketing literature loyalty, in its simplest terms, is equated with repeat purchase behaviour or intent to repurchase.

Loyal visitors are thought to demonstrate commitment to a place or protected area through repeat visitation, recommending others visit or positive word of mouth communications (Baker & Crompton, 2000; Zabkar et al., 2009). Repeat visitation is desirable as it requires less expenditure than capturing first time visitors. Other positive outcomes of loyal behaviours that are of interest to

managers can include enhanced reputation, political support and greater profitability (Baker & Crompton, 2000; Wang et al., 2009; Zabkar et al., 2009).

4.2 Loyalty and protected area management

A handful of published examples exist regarding research into visitors' stated behavioural intentions stimulated by their visit to a protected area. Tian-Cole et al. (2002) explored the behavioural intentions of visitors to a wildlife refuge in Texas. More recently Lee et al. (2004; 2007) investigated the behavioural intentions of tourists at the Umpqua National Forest in Oregon, and Weaver and Lawton (2011) the loyalty of visitors to South Carolina's Francis Beidler Forest. Appalachian Trail users (Kyle et al., 2004) and tourists to the Galapagos (Rivera & Croes, 2010) and to Arkansas-Eureka Springs (Chi, 2012) have also been the focus of loyalty research.

In all cases, core items have included intention to revisit and recommending the destination to others. Generally, a lower mean has been obtained for revisiting than recommending, prompting Rivera and Croes (2010) to conclude that intention to revisit may not be a good predictor of loyalty especially for iconic destinations such as the Galapagos which may be a 'once in a lifetime' experience.

To-date, loyalty has not been an explicit focus of visitor surveys conducted by protected area agencies. However, items that are currently measured by managers such as 'how strongly would you recommend this park' (WA DEC Visitor Survey, personal communication, 2012), can directly contribute to measuring loyalty.

4.3 Measuring loyalty

The items listed in Table 2 have been used by researchers to measure behavioural intentions and more recently loyalty. Usually more than one of these items is included in a visitor questionnaire to measure behavioural intentions/loyalty (Table 3, column 3). Respondents are provided with a 5, 7 or 9 point scale. Items 1-4 (Table 2) have been used in a number of studies (e.g., Tian-Cole et al., 2002; Lee et al., 2007; Weaver & Lawton, 2011). Weaver and Lawton (2011) note that items 5-8 are *ad hoc*, meaning that they have not been previously used and tested.

Most studies apply factor analyses to determine the factors describing loyalty. For example, Tian-Cole et al. (2002) reduced their items, using factor analysis, to encouraging friends and relatives to visit, visiting again and saying positive things, to work with only one factor for behavioural intentions. Weaver and Lawton (2011) used factor analysis to identify three factors describing loyalty – referral and repeat; volunteering; advocacy and financial support.

Working with loyalty as a construct continues to be highly variable across studies. Tian-Cole et al. (2002) ensured they had only one factor for behavioural intentions by removing items. Weaver and Lawton (2011) identified and used three factors to describe loyalty. As noted previously, a number of their behaviour statements were *ad hoc*. This diversity and evidence that statement (i.e., item) development is in the early stages, emphasizes the need for future research.

4.4 Relationships between loyalty (behavioural intentions), satisfaction and service quality

In marketing, satisfaction is of central interest given that satisfaction with products and services contributes to customer loyalty (Oliver, 1999). As such, the relationships between satisfaction and loyalty are also of great interest to tourism, recreation and protected area researchers (Lee et al., 2004; Yuksel et al., 2010). Information on overall satisfaction is widely collected and reported, in part based on the assumption that loyal customers are satisfied. Recent research has identified visitor satisfaction as an important determinant of loyalty, with greater levels of satisfaction associated with increased likelihood of repeat visitation and willingness to recommend to others (Faullant et al., 2008; Yuksel et al., 2010).

Table 3. Examples of recent nature based tourism studies examining service quality, satisfaction and loyalty (study location and sources given in column 1)

Application & author(s)	Variables examined	Output variables	Results
1. Visitors to a wildlife refuge in Texas, US (Tian-Cole et al., 2002)	<ol style="list-style-type: none"> 1. Quality of performance – education & conservation, staff/volunteers, comfort amenities, cleanliness, information. 2. Quality of experience – achievement, introspection/nostalgia, escape, physical fitness, new people. 3. Overall service quality – single item perceptions of destination’s attributes. 4. Overall satisfaction – satisfied/dissatisfied, pleased/displeased, favourable/unfavourable, positive/negative. 	Behavioural intentions: <ul style="list-style-type: none"> • Recommend to others • Revisit • Positive word of mouth • Pay higher price • Would not return • Visit another refuge if this one not available 	Improved service quality and satisfaction can result in repeat visitation and positive word of mouth. Service quality and satisfaction have independent effect on visitors’ future behavioural intentions.
2. Appalachian Trail (AT) users, US (Kyle et al., 2004)	<ol style="list-style-type: none"> 1. Leisure involvement – attraction, self-expression & centrality to lifestyle. 2. Psychological commitment – informational complexity, volitional choice & position involvement (i.e., place identity). 3. Behavioural commitment – personal & behavioural (social investment & financial investment). 4. Resistance to change – activity resistance & setting resistance. 	Behavioural loyalty: <ul style="list-style-type: none"> • Annual frequency of use – (a) days spent on the trail & (b) miles hiked along the trail • Proportion of annual use devoted to AT 	Measurement model (including behavioural loyalty) was adequate and reliable.
3. Visitors to Umpqua National Forest, Oregon, US (Lee et al., 2004)	<ol style="list-style-type: none"> 1. Service quality – facility, health, staff & information. 2. Satisfaction – enjoyment, willingness to pay, dissatisfaction. 	Behavioural intention: <ul style="list-style-type: none"> • Recommend • Positive word of mouth • Long-term intention to revisit • Short-term intention to revisit 	Service quality is an antecedent of satisfaction. Satisfaction plays a mediating role between service quality and behavioural intentions. Service quality has a direct effect on behavioural loyalty.
4. Visitors to	1. Service quality – health & cleanliness, safety & security,	Destination loyalty:	Service quality directly influences activity

<p>Umpqua National Forest, Oregon, US (Lee et al., 2007)</p>	<p>condition of facilities, responsiveness of staff, recreation setting.</p> <ol style="list-style-type: none"> 2. Satisfaction – enjoyment, well worth the money, disappointment with some aspects. 3. Activity involvement – important activity, activity at this place is a gift & pleasure, place says a lot about me (=place attachment items). 	<ul style="list-style-type: none"> • Attitudinal loyalty – place attachment & psychological commitment • Conative loyalty – word-of-mouth & intention to return • Behavioural loyalty – total annual number of visits to destination 	<p>involvement & satisfaction.</p> <p>Activity involvement directly influences attitudinal & behavioural loyalty.</p> <p>Satisfaction directly influences attitudinal & conative loyalty.</p> <p>Satisfaction & activity involvement play a mediating role between service quality & destination loyalty.</p> <p>Attitudinal loyalty influences conative loyalty, which in turn influences behavioural loyalty.</p>
<p>5. Visitors to Cantabria region, Spain (del Bosque and san Martin, 2008)*</p>	<ol style="list-style-type: none"> 1. Expectations – of destination & experience. 2. Emotions – positive & negative. 3. Satisfaction – overall. 4. Destination image – cognitive & affective. 	<p>Loyalty:</p> <ul style="list-style-type: none"> • Intention to revisit • Recommend to others 	<p>Preconceived image of destination influences expectations and loyalty.</p> <p>Satisfaction is not influenced by image.</p> <p>Satisfaction is influenced by emotions.</p> <p>Satisfaction has a major influence on behavioural intentions.</p>
<p>6. Visitors to four tourist attractions in Wielkopolska and Kujawy regions, Poland (Nowacki, 2009)*</p>	<ol style="list-style-type: none"> 1. Motivation - educational; socio-recreational. 2. Performance - exhibition; sources of information; services. 3. Satisfaction - boring-interesting; tiring-relaxing; irritating-pleasant. 4. Benefits - recreational; educational; social. 	<p>Behavioural intentions:</p> <ul style="list-style-type: none"> • Loyalty • Recommendation • Willingness to pay 	<p>Benefits and quality of provider's performance have greater effect on behavioural intentions than visitor satisfaction.</p> <p>Benefits is the intermediate factor between quality of performance and behavioural intentions.</p>
<p>7. Visitors to Guilin city, China (Wang et al., 2009)*</p>	<ol style="list-style-type: none"> 1. Tourist expectations – overall quality, customization & reliability. 2. Destination image – brand, nature and culture image, entertainment. 3. Perceived quality – attractions, food & accommodation, transportation, local environment. 4. Perceived value - money, time & effort. 5. Tourist satisfaction – overall, with expectations, compared to other places. 	<p>Loyalty:</p> <ul style="list-style-type: none"> • Revisit • Recommend 	<p>Tourist expectations, destination image, perceived quality and perceived value are antecedents of tourist satisfaction.</p> <p>Tourist satisfaction has a positive effect on tourist loyalty.</p>

	6. Tourist complaints – complain, negative word of mouth, seek redress.		
8. Visitors to four tourist destinations in Slovenia (Zabkar et al., 2009)*	<ol style="list-style-type: none"> 1. Destination's attributes. 2. Perceived quality of destination's offerings – accessibility, cleanliness, diversity of attractions, accommodation, friendliness, opportunities for rest. 3. Visitor satisfaction – pleased with destination, delighted with destination, destination exceeded expectations, sense of joy to come to destination. 	Behavioural intentions: <ul style="list-style-type: none"> • Revisit • Recommend • Positive word of mouth 	Visitor satisfaction alone can not predict visitors' behavioural responses. Service quality is directly related to satisfaction and behavioural intentions.
9. Nature based tourists in Alabama, US (O'Neill et al., 2010)	<ol style="list-style-type: none"> 1. Quality of staff (PEOPLE). 2. Service delivery (SERVICE). 3. Physical condition of destination (TANGIBLE). 4. Washroom quality (WC). 5. Overall satisfaction. 	Future behavioural intentions: <ul style="list-style-type: none"> • Revisit • Recommend 	Four factors (PEOPLE, SERVICE, TANGIBLE & WC) predict overall satisfaction & future behavioural intentions.
10. Ecotourists visiting the Galapagos Islands, Ecuador (Rivera & Croes, 2010)	<ol style="list-style-type: none"> 1. Perceived price. 2. Overall service quality. 3. Perception of performance – travel experience (e.g., hospitality of local community, accommodation, local environmental quality, accessibility). 4. Value for price paid. 5. Overall satisfaction. 	Loyalty: <ul style="list-style-type: none"> • Revisit • Recommend 	Significant difference between tourists' intent to return (low) & intent to recommend (high). Perception of performance is a good indicator of quality, value, satisfaction & intent to recommend. Satisfaction assists in predicting intent to return & recommend. Value is a good predictor of satisfaction. Intent to return is a good predictor of intent to recommend.
11. Visitors to South Carolina protected area, US (Weaver & Lawton, 2011)	Loyalty attitudes: <ol style="list-style-type: none"> 1. Place-dependence (e.g., 'No other place offers the experiences that [this place] offers'). 2. Place-identity (e.g., '[this place] means a lot to me'). 	Loyalty intentions: <ul style="list-style-type: none"> • Recommend • Revisit • Volunteering (onsite/offsite) • Willingness to donate • Willingness to pay higher entrance fee 	Factor analysis of loyalty intentions produced three factors: referral and repeat; volunteering; advocacy and financial support.

		<ul style="list-style-type: none"> • Write to politician 	
12. Visitors to Arkansas—Eureka Springs, southern US (Chi, 2012)	<ol style="list-style-type: none"> 1. Destination image – travel environment, natural attractions, entertainment & events, historic attractions, travel infrastructure, accessibility, relaxation, outdoor activities, price & value. 2. Attribute satisfaction (i.e., perception of performance) – lodging, dining, shopping, attractions, activities & events, environment, accessibility. 3. Overall satisfaction. 	<p>Destination loyalty:</p> <ul style="list-style-type: none"> • Revisit intention • Referral intention 	<p>For first-time visitors, both overall satisfaction & attribute satisfaction directly influenced destination loyalty.</p> <p>For repeat visitors, only overall satisfaction directly influenced destination loyalty.</p> <p>Overall satisfaction had a stronger impact on first-timers’ destination loyalty than on that of repeat visitors.</p>
13. Crilley et al. (2012)	<ol style="list-style-type: none"> 1. Service quality (performance) – facilities, service, information. 2. Benefits obtained – experiencing nature, learning about nature, learning about Australia, visiting interesting destinations, experiencing local culture, discovering new destinations, enjoying scenery, spending time with family & friends, escaping everyday routines, meeting new people, escaping pressures of daily life, improving health, taking time out for myself. 	<p>Overall outcomes:</p> <ul style="list-style-type: none"> • Say positive things • Revisit intention • Recommend to others • Overall satisfaction • Sharing of positive images (e.g., photos) 	<p>Correlations involving benefits tend to be higher than correlations involving performance.</p> <p>Relaxation benefits were significantly related to intention to revisit.</p> <p>Nature benefits were significantly related to both intention to recommend & overall satisfaction.</p>

* More general tourism studies; included as they rely on variables & models of potential interest to nature-based tourism research

Service quality as well as satisfaction is an important determinant of loyalty (Baker & Crompton, 2000; Lee et al., 2004; Wang et al., 2009). In tourism it is generally accepted that high service quality and the resulting satisfaction will result in positive word of mouth, recommendations and repeat visitors. Lee et al. (2004), in their study of visitors to a national forest, illustrated the direct effect of service quality on behavioural intentions, in addition to influencing behavioural intentions through satisfaction (Figure 2). That is, satisfaction does not capture all aspects of loyalty deriving from service quality. This suggests the benefits of moving beyond measuring satisfaction of visitors to protected areas, to measuring behavioural intentions (loyalty) to more completely capture the effects of service quality and other factors.

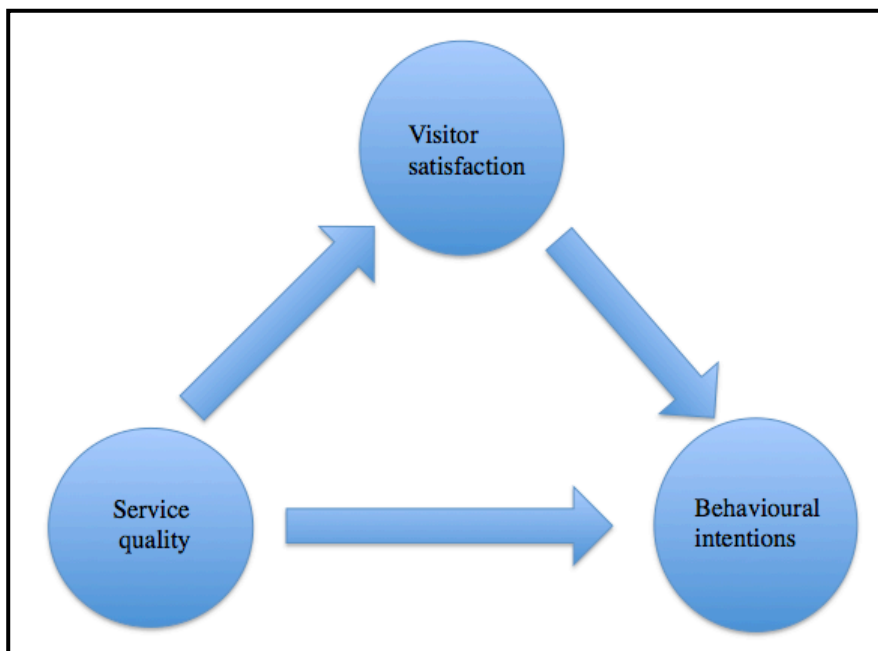


Figure 2. Service quality, satisfaction and behavioural intentions of forest visitors (Lee et al., 2004)

These other factors include quality of experience, leisure involvement, activity involvement, commitment, resistance to change, expectations, emotions, destination image, motivation, perceived quality, perceived value, perceived price, value for price, tourist complaints, place-dependence, place-identity and benefits (Table 3, column 2). One or more of these factors have been included in studies of the service quality-satisfaction relationship and more recently in studies of service quality-satisfaction-behavioural intentions to better explain the influences on (or what predicts) behavioural intentions. Over and over again, research has shown that service quality contributes to satisfaction and both in turn contribute to behavioural intentions but there are other influences as well. The variables listed in Table 3, column 2 are part of this ongoing search for better explanations of what contributes to intentions.

Over the last decade structural equation modelling (SEM) has been extensively used in tourism, recreation and protected area research. *Structural equation modeling* (SEM) is a statistical technique for describing and testing the causal relationships between variables. Multiple relationships can be assessed simultaneously (Bollen, 1989). The strength of relationships can be tested quantitatively, but the direction of causality (i.e., deciding that 'a causes b' rather than vice versa) is a qualitative judgment. Recent modeling has examined the relationships between loyalty behaviours and service quality, visitor satisfaction and other antecedents of loyalty. Many of the studies overviewed in Table 3 relied on SEM.

Although the results from this research are complex (Table 3, column 4) several general conclusions can be drawn. First, the search continues to fully explain the influences on behavioural intentions. Satisfaction and service quality are obviously important, but other factors are at play as well. Second, satisfaction is an important influence, either in its own right or as a mediating influence on service quality and other factors. Third, for satisfaction, it is challenging to meaningfully compare the results of studies such as those overviewed in Table 3, given the myriad of different ways in which it has been conceptualized and measured: compare the enormous range of ways in which it has been operationalised – refer to column 2 in Table 3. Fourth, there has been prolonged interest in and attention to ‘experiences’ as an important contributor to positive behavioural intentions. A small number of researchers have used benefit items as their way to measure satisfaction with the quality of experience (e.g., Tian-Cole et al., 2002; Crilley et al., 2012). The challenge remains one of finding ways, as mentioned earlier in this review, for managers to manage to achieve the required/desired experiences, as well as being able to measure and report on when they have done so.

5. Future opportunities and research needs

Protected areas in Australia and many other countries have a dual conservation and recreation mandate. An important related role is facilitating and fostering tourism resulting in benefits for both protected areas and people. Protected area agencies need to be able to provide recreation and tourism opportunities from which users can derive satisfaction. This is because visitors who are highly satisfied with their experience are more likely to become repeat visitors, recommend the destination to others and support or be an advocate for protected areas – all elements of loyalty. The following recommendations detail how protected area managers can better understand and manage the complex relationships between service quality, visitor satisfaction and behavioural intentions, thereby enhancing the loyalty of their visitors.

5.1 Moving beyond measuring and reporting overall satisfaction

For protected areas the ongoing emphasis in research and management on satisfaction is misplaced given our central interest is outcomes - i.e., do visitors come back, do they visit and support other parks or parks more generally, do they support protected areas, would they be willing to pay more? Loyalty is of increasing interest to managers with a number of the ‘features’ of loyalty already measured in visitor surveys e.g., intention to re-visit, recommending the destination to others. A reason why we keep measuring satisfaction rather than focusing on outcomes might be because of a lack of confidence regarding properly measuring loyalty. However, the broad and different definitions of satisfaction mean that focusing on satisfaction as an objective is problematic. While loyalty may be multi-dimensional, for example recommending to others and paying higher fees may represent different aspects of loyalty, concentrating on these outcomes may provide more interpretable and useful results than concentrating on the ‘difficult to tie down’ satisfaction.

5.2 Obtaining a better understanding of loyalty behaviours and measuring them

The current dilemma faced by protected area researchers and managers and others working in the tourism and recreation fields is how to define and apply simple measures of loyalty. For example, although visitors to protected areas may have positive experiences they may not have the desire to return. Rivera & Croes (2010) describe how visits to the Galapagos Islands are a ‘once in a lifetime’ experience for most visitors so

intention to re-visit received a low score from those surveyed. Weaver and Lawton (2011) also comment that repeat visitation on its own is too simple to capture the complexity of loyalty as a construct.

Recent research by Weaver and Lawton (2011) where they describe loyalty using three factors (referral and repeat visit intentions; volunteering; advocacy and financial support) shows promise. For 'once in a lifetime' destinations, however, intention to revisit may be irrelevant. Another way of considering and measuring intention to revisit relates to loyalty to a park system or to the concept of 'parks' more generally. This has been referred to as 'transferred loyalty' (Pearce & Kang, 2009).

If transferred loyalty can be established for a park system and influenced by individual experiences and individual parks then each visit to a protected area could be viewed as part of a long term relationship rather than a single transaction. This promises to be a very important area for future research, especially for an agency that manages a park system with numerous and diverse individual parks. The role of service quality and visitor satisfaction in the development of transferred loyalty is still unknown. Future research on the effect of novelty seeking on loyalty also warrants attention (Pearce & Kang, 2009; Pinkus, 2010). Novelty seeking is of particular importance to remote parks throughout Australia.

5.3 Obtaining a better understanding of the influences on visitor loyalty

Research shows that visitor satisfaction is influenced by more than service quality. Also, satisfaction and service quality are separate constructs with each having differing effects on loyalty (e.g., Tian-Cole et al., 2002; Zabkar et al., 2009). Future studies need to look at the influence of a suite of factors including service quality and satisfaction, but not restricted to them, that may be influential (Zabkar et al., 2009). Research also shows that satisfaction does not mediate all influences on loyalty, necessitating consideration of both direct and indirect (i.e., mediated by satisfaction and potentially other variables) influences on it. Furthermore, given the broad and different definitions of satisfaction, the consideration of satisfaction may not assist managers. Instead, it may be more productive to establish direct links between loyalty and better defined attributes, some of which (such as service quality and expectations) managers can manipulate.

A fruitful area for potential investigation regarding their effects on loyalty to protected areas is benefits. The benefits-based approach views visitor satisfaction as reflecting psychological outcomes from the recreational experience. Limited research has been undertaken on the benefits of visiting protected areas, with the exception of the wealth of activity by Bev Driver and colleagues (see Driver *et al.*, 1991; Driver, 1996, 2008). This is because benefits are often difficult and time consuming to measure. And, having obtained this information it is often not clear what managers might do to enhance the delivery of benefits.

While quality of service data can be easily used by managers, there is increasing research highlighting the conditions that lead to benefit attainment (Weber, 2007) which will help managers to facilitate the desired outcomes. Benefits data can be used by managers to contribute to their understanding of how their actions and decisions affect visitors by making links between inputs, outputs and outcomes. In addition, identifying which specific benefits apply to specific protected areas and specific visitor segments can help managers improve visitor experience opportunities as a result of recreation demand analyses as well as promote a greater understanding of the importance of protected areas (Driver & Bruns, 1999; Weber, 2007; Crilley et al., 2012).

5.4 Service quality and its influence on loyalty

Research has shown that service quality is correlated with loyalty behaviours (Tian-Cole et al. 2002; Tian-Cole and Crompton 2003; Nowacki 2009; Zabkar et al. 2009). However, we do not know if improvements

to service quality (e.g., more information, greater presence of staff, better facilities) results in increased loyalty. That is, the observational data typically collected from visitor surveys establishes a relationship between service quality and loyalty but does not prove that this relationship is causal. Experimental data are needed to measure the effects of services and facilities on loyalty. This experimental data should be obtained from scientifically designed experiments involving interventions by managers to manipulate the level of service quality and then observing the effects on loyalty. Such experiments will produce results that are not only more easily interpretable but will directly address the question of which management actions will improve loyalty. This question is vitally important to management.

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