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Developing a better understanding of the complexities of visitor loyalty to Karijini National Park, Western Australia

Susan A. Moore [a], Kate Rodger [a, *], Ross H. Taplin [b]

[a] School of Veterinary and Life Sciences, Murdoch University, Australia
[b] School of Accounting, Curtin Business School, Curtin University of Technology, Australia

HIGHLIGHTS

- Developing a better understanding of loyalty as a multi-dimensional construct.
- An increasing hierarchy of effort for loyalty from visiting another park through to advocating, and volunteering.
- There is a need to examine loyalty to parks generally rather than just a single destination.

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ABSTRACT

Visitor loyalty is essential for the future of parks; however our knowledge of it is poor and confounded by conceptualisation and measurement issues with loyalty often considered a single construct. Furthermore, previous research has focussed on loyalty to a single destination rather than loyalty to a park system. This paper analyses the loyalty intentions of visitors to Karijini National Park, Western Australia. Relationships between loyalty measures to this park and to parks generally are explored. Rather than a single construct, loyalty was evidenced by three dimensions within an increasing hierarchy of effort – a) visiting another park, b) referring and recommending, and c) advocating, paying, volunteering, and visiting again. Visitors who wanted access to friendly, helpful rangers were more likely to undertake loyalty behaviours requiring greater effort. Further refining loyalty's multiple dimensions is an important focus for future research complemented by recent efforts to match loyalty measures with actual visiting behaviour.

1. Introduction

National parks have a pivotal role in nature-based tourism as well as global nature conservation efforts (Buckley, 2009). As such, it is essential that the agencies responsible for their management can provide for tourism and recreation opportunities whilst also protecting their biological diversity (Newsome, Moore, & Dowling, 2013). A paradigm shift is underway, moving park management from perceiving visitors as a threat to ecological integrity, to recognising the importance of visitors in providing economic and political support for parks and other protected areas (Phillips, 2003; Weaver & Lawton, 2011). Visitors to such areas are considered to be an important source of revenue, but equally importantly satisfied and loyal visitors provide social, political and financial support (Newsome et al., 2013; Moore, Weiler, Moyle, & Eagles, 2013; Weaver & Lawton, 2011). Such support is recognised as essential in the changing social and political environment of the twenty-first century (Rodger, Taplin, & Moore, 2015; Weaver & Lawton, 2011; Weiler, Moore, & Moyle, 2013).

Due to changing political and economic priorities park agencies are facing decreasing budgets (Kaczynski & Crompton, 2004; Lee, Graefe, & Burns, 2007; Moore et al., 2013). For some park agencies visitors can provide up to 80% of total revenue for a park through individual charges to them, such as entrance fees (Buckley, 2009). Visitors are an increasingly essential source of revenue as well as providing support on-site through volunteering to help with park management, as well as off-site through advocacy, donations, and positive word of mouth recommendations that encourages others to visit and contribute to park management. Parks and other protected areas are increasingly recognized as delivering

* Corresponding author. School of Veterinary and Life Sciences, Murdoch University, South St, Murdoch WA 6150, Australia.
E-mail address: K.Rodger@murdoch.edu.au (K. Rodger).

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physical, psychological, sociocultural, environmental, and economic benefits (Driver, 2008; Moyle, Weiler, & Moore, 2014). When they do so, visitors are satisfied and more likely to contribute to park management in a variety of ways (Eagles, 2001; Kyle, Graefe, Manning, & Bacon, 2004; Lee et al., 2007; Taplin, Rodger, & Moore, 2016).

In today's highly competitive world of public sector funding and park management, loyalty is considered essential to mitigate against budget cuts and increasingly scarce resources (Taplin et al., 2016; Weiler et al., 2013). Loyalty, however, remains an elusive concept, with recent reviews (e.g., Dolnicar, Coltman, & Sharma, 2013; Moore, Rodger, & Taplin, 2015) identifying concerns regarding the association between satisfaction and loyalty (the latter also operationalized as behavioural intentions), and inconsistency in operationalizing key constructs such as loyalty. Moore et al. (2015) further elaborate on questions regarding loyalty as a single construct, as construed in most structural equation modeling efforts, or as having multi-dimensional properties.

As such, the aim of this paper is to investigate the nature of loyalty to a single destination and to parks more generally. The dominant focus in previous research has been loyalty to a single destination, hence the important contribution of this research to the latter. This investigation includes: (1) describing the loyalty of adult visitors to a single park and to parks more generally; (2) analysing the structure of loyalty as a construct with a particular emphasis on the constituent dimensions; and (3) analysing the influence of selected visitor and visit characteristics to further understand the nature of loyalty. The concept of loyalty and recent associated research in parks and protected areas provide the focus for the literature review. The rationale for selecting Karijini National Park and parks more generally follows. The methods are then described, followed by the results and a discussion of the conceptual and methodological implications of this research.

2. Literature review

Customer loyalty has been long recognised as important in the tourism, hospitality, and leisure fields (Chi, 2012; Oliver, 1999; Tian-Cole, Crompton, & Willson, 2002; Weaver & Lawton, 2011). Loyalty can be simply defined as a commitment to a particular destination, place or brand (Baker & Crompton, 2000; Rivera & Croes, 2010). Loyal customers are important because they are regarded as less sensitive to increased pricing and apart from being repeat purchasers, they can enrol new customers through positive word of mouth. Given it is cheaper to retain existing customers than pursue new ones, clear financial benefits can come from loyalty for businesses and service providers (Weaver & Lawton, 2011).

Loyalty to tourism destinations has been the subject of intense academic interest and debate (Baker & Crompton, 2000; Oppermann, 2000; Prayag & Ryan, 2012). It has generally been investigated as part of a complex relationship with the antecedents of service quality and satisfaction (Dolnicar et al., 2013; Kyle et al., 2004; Moore et al., 2015; Rivera & Croes, 2010; Tian-Cole et al., 2002; Weaver & Lawton, 2011). Visitor loyalty is now considered to be a more accurate predictor and measure of performance than satisfaction (Chi & Qu, 2008; Moore et al., 2015). An influential model in loyalty research is as proposed by Oliver (1999). Loyalty is conceptualised as a complex but sequenced construct (Lee et al., 2007; Weaver & Lawton, 2011). Oliver (1999) described four stages: *cognitive* loyalty where the consumer is aware of the brand; *affective* (attitudinal) loyalty with attendant increased commitment; *conative* loyalty, which is the behavioural intention stage (and the focus on this study); and finally *action* loyalty where intentions are converted to actions. All phases are hypothesized as contributing to the causal relationship of loyalty with visitors becoming loyal in attitudinal sense, followed by a conative manner and finally in their behavioural actions (Lee et al., 2007; Oliver, 1999; Weaver & Lawton, 2011). Limited use of this model has been made in tourism research in parks; notable exceptions are studies by Lee et al. (2007) and Weaver and Lawton (2011).

Studies have focused on loyalty to destinations (e.g. del Bosque & san Martin, 2008), festivals (e.g. Zabkar, Brencic, & Dmitrovic, 2010), and iconic tourism destinations such as the Galapagos (Rivera & Croes, 2010) and Mauritius (Prayag & Ryan, 2012). Structural equation modelling is a favoured method, with the relationships between service quality, satisfaction and loyalty explored (Dolnicar et al., 2013; Kyle et al., 2004; Moore et al., 2015). Other variables frequently included in such models as antecedent to loyalty include destination image (e.g., Prayag & Ryan, 2012), price and value (e.g., Rivera & Croes, 2010), commitment (e.g. Kyle et al., 2004), activity involvement (e.g., Lee et al., 2007), and place attachment (e.g., Lee et al., 2007; Prayag & Ryan, 2012; Weaver & Lawton, 2011). This study extends consideration of loyalty beyond a single destination to parks in Australia and more generally. This is a new contribution conceptually and empirically given the focus on destinations and place attachment in research to-date. A broader approach to understanding loyalty was recommended by Moore et al. (2015) in their review and research agenda for loyalty in nature-based tourism.

In tourism research, where loyalty is widely explored using structural equation modelling, many include loyalty as a single construct, albeit with multiple dimensions (Dolnicar et al., 2013; Moore et al., 2015). To add to the confusion, in recent years this end product of satisfaction and quality has been operationalized as 'loyalty' and 'behavioural intentions'. In their meta-analysis of tourism papers addressing satisfaction and behavioural intentions Dolnicar et al. (2013) concluded that it is not possible to distinguish between the two. To add further to the research challenge, researchers such as McKercher and Tse (2012) have suggested that intention to revisit is not a valid proxy for actual repeat visitation. This concern can be countered by collecting data on actual behaviour: for example, how many days in a year the visitor spends recreating at a destination, such as in the study by Lee et al. (2007) at Umpqua National Forest in southwestern Oregon (Lee et al., 2007). Another example of actual behavioural data collected, in a study of visitors to the Appalachian Trail (Kyle et al., 2004), was days spent on and miles hiked along the Trail, and the proportion of annual use devoted to the Trail.

Over the last decade loyalty and behavioural intentions have been the focus on research efforts in ecotourism and park and protected area research (Kim & Brown, 2012; Kyle et al., 2004; Lee et al., 2007; Rivera & Croes, 2010; Ramao, Neuts, Nijkamp, and Shikida 2014; Rodger et al., 2015; Taplin et al., 2016). Confusingly, the end point of such research, as single construct, has been given a plethora of names: loyalty (Romao et al., 2014), behavioural loyalty (Kyle et al., 2004), destination loyalty (Kim & Brown, 2012), and future behavioural intentions (Tian-Cole et al., 2002). Other researchers provide two or more dimensions in their efforts to operationalize loyalty, for example, Rivera and Croes (2010) provide return and recommend as the endpoints for their quality, satisfaction, behavioural intentions model. Lee et al. (2007) sought to operationalize Oliver's (1999) model through having destination loyalty as multi-dimensional, including attitudinal, conative and behavioural loyalty. Dolnicar et al. (2013) rightly note that these diverse operationalization efforts have done little to advance this field, instead leading to confusion and an inability to compare across studies.

Where structural equation modelling has been used for analysing loyalty to natural destinations such as parks, forests, and long distance walk trails, multiple items have been deployed to measure

loyalty behaviours and then included as a *single construct* in the structural model. For example, Kim and Brown (2012) in studying visitors to the Flinders Ranges in South Australia relied on two items for the construct of destination loyalty in their proposed model. Lee et al. (2007), in studying visitors to Umpqua National Forest, Oregon, relied on two items to measure conative loyalty. Prior to this, Kyle et al. (2004) in their study of hikers along the Appalachian Trail drew on three items for behavioural loyalty as the basis of their structural model. The construction of all three models was based on careful theorising and in the case of Lee et al. (2007) previous empirical research.

A diversity of items has been used to investigate loyalty and its companion constructs. Recommend and revisit have been widely used in ecotourism and park research, with a number of studies restricted to these two items (e.g. Kim & Brown, 2012; O'Neill, Riscinto-Kozub, and van Hyfte 2010; Rivera & Croes, 2010). A recent promising development in the selection and application of items for measuring loyalty, as a complex, multi-dimensional construct, has been provided by Weaver and Lawton (2011). In their study of visitors to a South Carolina Protected Area they identified three groups of items (labelled factors), each of which required increasing levels of commitment: referral and repeat; volunteering; and advocacy and financial support. The higher levels of commitment were also activities that could take place offsite, opportunities for analysis pursued in this study. A related partitioning of increasing commitment was also found by Tonge, Ryan, Moore, and Beckley (2015) in their study of visitors to Ningaloo Reef, Western Australia. The lowest commitment was 'do it yourself' behaviours such as conserving water yourself, with moderate commitment represented by items such as telling others to conserve water, and the highest level of commitment, for example donating money.

2.1. Karijini National Park as the study site

Karijini National Park was selected as the study site for several reasons. First, the park is an iconic destination with a large number of first-time visitors who are unlikely to return, making it comparable with other iconic places that have been the subject of loyalty research focused on ecotourism, such as the Galapagos (Rivera & Croes, 2010). Second, it is part of a system of 100 parks and reserves managed by the Western Australian Department of Parks and Wildlife, enabling us to ask questions about loyalty to other parks in the state of Western Australia. Third, parks and other protected areas are a well-known land use in Australia with 18% of terrestrial Australia in protected areas, which includes national parks (AG DoE 2016). This familiarity with protected areas Australia wide also enabled us to ask about loyalty to parks more generally.

Karijini is the second largest park in Western Australia, with an area of 627,455 ha. Located approximately 1400 km north of Perth (Fig. 1) it features spectacular geological formations including deeply incised gorges complete with waterfalls and rock pools. Activities include hiking, sightseeing, exploring, photography, nature study, and camping. The Park receives about 180,000 visitors per annum, with most camping overnight. Spending an extended time in the Park enabled visitors to provide well-informed responses to our questionnaire. Visitors were intercepted and given a questionnaire to complete and return to the researchers at the main egress point from Dales Gorge, adjacent to a large parking area and a short walking distance from Dales Gorge campground.

Visitors to the Park are 'nature explorers' (40%) with a further third of all visitors to the Park 'nature experience seekers' (34%) (Smith, Tuffin, Taplin, Moore, and Tonge 2014). Nature explorers are the most widespread visitor type found in Western Australian national parks. They participate in many activities including sight seeing, hiking, photography, and birdwatching. Their main purpose in visiting parks is enjoying nature and the outdoors. Nature experience seekers immerse themselves in an even wider range of activities than the nature explorers, including adventure/exercise and fitness and health in addition to the activities listed for nature explorers. They also have a strong interest in learning about and experiencing nature as well as social connection and rejuvenation (Smith, Tuffi, Taplin, Moore, & Tonge, 2014).

Fig. 1. Map showing location of Karijini National Park (source: http://www.romartraveler.com/ROMAR07/Romar07Pages/Austrialia-%b0%a9-PacificIslands/OUTBACK-%b0%a9-KARIJI.html).

3. Method

This study of loyalty was a component of a larger study examining the antecedents of loyalty as well as loyalty as a construct (see Rodger et al., 2015 for details). The research objectives of the component reported in this paper were to: (1) describe the loyalty of adult visitors to Karijini National Park and to parks more generally; (2) analyse the structure of loyalty as a construct with a particular emphasis on the constituent factors; and (3) analyse the influence of selected visitor and visit characteristics on loyalty. The broader study examined the effect of two management interventions – an increased ranger presence and provision of an information sheet –on the importance of services and facilities, as well as associated satisfaction and loyalty (Rodger et al., 2015). The interventions of the broader study were undertaken over 12 days of a 16 day sampling period. The results used in the component reported in this paper were from a four-day sampling period when no interventions were undertaken.

3.1. Questionnaire distribution and design

All adult visitors leaving Dales Gorge over the sampling period were invited to complete the 4-page questionnaire. The loyalty questions pivotal to this study asked respondents to consider loyalty intentions expressed as eight items (Table 1). These items move from lower investment to higher investment intentions. An example of the former is *Recommend to friends and relatives that they visit this park*; while an example of the latter is *Pay increased park fees to improve park facilities and park management*. Construction (i.e. ordering) and content of the list and the wording of the items were strongly influenced by Weaver and Lawton's (2011) study of loyalty intentions at Francis Beidler Forest, South Carolina and Tonge et al. (2015) recent study of pro-environment behavioural intentions at Ningaloo Marine Park, Western Australia. A 7-point Likert scale was provided for each item, with 1 (very unlikely) through to 7 (very likely). Labels were not provided for the intervening values.

The novel contribution of this study was attention to loyalty beyond the park being visited, Karijini National Park, to ask respondents about their loyalty intentions with respect to national parks more generally. Five or the eight items were modified to make them relevant to parks more generally: Visit *another national park* in Australia (L1), Talk to other people about the importance of this park *and other protected areas* (L4), Donate money to help protect this park *or similar protected areas* (L6), Pay increased park fees to *improve park facilities and park management* (L7) and Volunteer my time to help conserve this park *or similar protected areas* (L8). This moves consideration of loyalty beyond the single destination, place-based emphasis of previous park loyalty research (*cf.* Kyle et al., 2004; Lee et al., 2007; Weaver & Lawton, 2011). These are new items and to our knowledge have not been included in other loyalty studies.

Table 1
Loyalty items.

Item number	Item wording from questionnaire
L1.	Visit another national park in Australia
L2.	Say positive things about this park to other people
L3.	Recommend to friends and relatives that they visit this park
L4.	Talk to other people about the importance of this park and other protected areas
L5.	Visit this park again
L6.	Donate money to help protect this park or similar protected areas
L7.	Pay increased park fees to improve park facilities and park management
L8.	Volunteer my time to help conserve this park or similar protected areas

Other elements of the questionnaire relevant to the findings analysed in this paper relate to factors that may explain loyalty responses. These include visitor and visit characteristics (home residency, gender, overnight/day visitor, and first-time/repeat visitor) and two questions relating to how important access to rangers and enjoying nature were to the visitor. Visitor's home residency, gender, overnight/day visitor, and first-time/repeat visitor questions were asked to provide background information.

Two of the importance items included in the broader study (Rodger et al., 2015) and integral to the visit characteristics – *Access to friendly, helpful rangers* and *Able to enjoy nature* – were also subject to detailed analysis in this paper. The first relates to the ongoing question, which has been raised by Manning and colleagues for several decades at least, regarding the need to have importance/satisfaction items that are 'manageable' (Manning, 2011). By manageable Manning and others, such as Fletcher and Fletcher (2003), mean that the item can be managed if improvement is required.

Fletcher and Fletcher (2003) study of Florida Parks had a specific focus on manageable items in their paper *Manageable Predictors of Park Visitor Satisfaction: Maintenance and Personnel*. They found through regression analyses that two predictor categories (groups of items) explained 34% of differences in visitor satisfaction: park personnel (i.e., friendly, helpful, available) and park maintenance. As such, we choose to include park personnel for further analysis in this study, covered by the importance item *Access to friendly, helpful rangers*. This item was also important for the broader intervention study, given that one of the interventions was the presence, or not, of rangers.[1]

We also included enjoying nature (item is *Able to enjoy nature* in the study questionnaire) in response to more recent research on benefits (Crilley, Weber, & Taplin, 2012; Manning, 2011; McCool, Clark, & Stankey, 2007). Crilley et al. (2012) in their study of Kakadu National Park, Northern Territory, Australia, explored both importance-performance and benefits and concluded that benefits obtained by visitors are stronger predictors of an overall response to a park visit than visitor service quality ratings (e.g. clean facilities, well-maintained roads). Of all the benefits listed in their questionnaire, *Experiencing nature and the natural environment* had the highest mean score. As such, we included the item *Able to enjoy nature* in the analyses presented here. Both items were measured on a 7-point Likert scale, from '1–Not at all important' to '7–Extremely important'.

3.2. Statistical analyses

A summary overview of visitor and visit characteristics introduces the results. This is followed by further descriptive statistics summarising the distribution of responses to the eight loyalty items and ordered from the most likely to the least likely based on mean responses. Also presented are descriptive statistics examining and providing the relative percentage of visitors likely to perform a loyalty behaviour relative to another loyalty behaviour. Pairwise comparisons give the basis for this examination. For example, what relative percentage of visitors are more likely to visit another national park versus donate money.

Correlations between loyalty items were analysed to begin the statistical investigation of the extent to which the eight loyalty items might represent one or a few loyalty dimensions. We then

[1] See Rodger et al. (2015) for more details on this broader study and its results.

Table 2
Distribution of responses to loyalty items.

Loyalty item	1[a]	2	3	4	5	6	7	mean	st. dev
L1. Visit another national park in Australia	1	0	0	2	2	15	79	6.69	0.78
L2. Say positive things about this park to other people	0	0	1	1	5	20	73	6.65	0.68
L3. Recommend to friends and relatives that they visit this park	0	0	0	2	7	18	73	6.59	0.79
L4. Talk to other people about the importance of this park and other protected areas	1	3	6	14	18	23	35	5.53	1.48
L5. Visit this park again	17	5	3	10	9	13	42	4.96	2.30
L6. Donate money to help protect this park or similar protected areas	11	7	11	21	18	15	17	4.42	1.86
L7. Pay increased park fees to improve park facilities and park management	15	9	10	22	18	12	14	4.11	1.93
L8. Volunteer my time to help conserve this park or similar protected areas	34	14	10	14	14	5	9	3.10	2.01

[a] The number 1 at the top of column 1 refers to 'very unlikely' to perform that loyalty behaviour, through to the number 7 at the top of column 7 referring to 'very likely' to perform that behaviour. Values given in columns headed 1–7 are percentages.

undertook factor analysis, using varimax rotation, to analyse the structure of the loyalty construct. Exploratory factor analysis was undertaken given the ability to be cognizant of the previous research just described, while acknowledging the inconsistency in construct operationalization with respect to both loyalty and behavioural intentions (Dolnicar et al., 2013) making an exploratory approach essential.[2] The solution provided in the results is parsimonious while being grounded in the reality of managing parks and engaging with the people that visit.

Each loyalty measure was regressed on the visitor's home residency, whether the visitor stayed overnight in Karijini, and the two importance items (Table 6). As part of this analysis, dummy variables were created for international (1 if the visitor's normal place of residence is outside Australia, 0 otherwise), interstate (1 if the visitor's normal place of residence is within Australia but outside Western Australia, 0 otherwise) and overnight (1 if the visitor is staying overnight in Karijini, 0 otherwise). The two importance items – *Access to friendly, helpful* rangers (Fletcher & Fletcher, 2003; Manning, 2011; Taplin et al., 2016) and *Able to enjoy nature* (Crilley et al., 2012) – were measured on a 7-point Likert scale, from 1–Not at all important to 7–Extremely important.

4. Results

There were 344 respondents, however, 16 were excluded due to incomplete responses to the eight loyalty questions. The response rate was 94%. Analysis is reported for the remaining 328 visitors. Of these, 47% were from Western Australia, 38% were interstate (from elsewhere within Australia) and 15% were international visitors. The proportion of respondents that were female was 68% and 76% stayed overnight. The majority were first-time visitors with only 18% being repeat visitors. Enjoying nature was very important for most visitors, with a mean response of 6.39 (SD = 1.01) and access to friendly, helpful rangers less so, with a mean of 4.4 (SD = 1.75).

4.1. Overall loyalty patterns

Most visitors indicated they are very likely to visit another Australian national park, say positive things about this park and recommend the park, with means exceeding six out of a maximum of seven (Table 2). Visitors were unlikely (mean less than 4) to volunteer to protect similar protected areas.

The percentages of visitors indicating they were more likely to perform one loyalty behaviour (row) than another (column) are provided in Table 3. For example, 19% of visitors were more likely to visit another national park in Australia (L1) than say positive things about the park (L2) and 11% were more likely to say positive things than visit another park. Note that a loyalty item is more likely to be performed relative to other loyalty items if the values in the row for that item are high and the values in the column for that item are low. The likelihoods of performing the first three loyalty behaviours (L1, L2 and L3 [recommend]) are considerably higher than the likelihoods of performing the other behaviours (at least 50% of visitors indicate they are more likely to perform L1, L2 or L3 than any of the other behaviour) (Table 3).

The exception to the tendency for the percentages to decrease as you move down a column (or across a row) is for talking to other people about the importance of this park and other protected areas and visiting this park again (L4 and L5). The loyalty item to visit the park again breaks the hierarchical trend of the other items by having more favourable preferences with respect to visiting another park in Australia, saying positive things and recommending to friends and relatives (L1–L3) than talking about the importance of parks (L4). For example, although visit this park again (L5) is generally lower on the hierarchy than talking to other people (L4) (for example, 36% of visitors indicate they are more likely to perform L4 than L5 but only 30% are more likely to perform L5 than L4; Table 3), 57% of visitors are more likely to visit another park in Australia (L1) than talk to other people (L4) but only 48% are more likely to visit another park in Australia (L1) than visit this park again (L5). This break in the hierarchy only occurs between L4 and L5.

There was a slight preference for donating money (L6) compared to paying fees (L7), with 42% of visitors indicating they were more likely to donate money than pay fees and 26% of visitors indicating they were less likely to (the remaining 32% were equally likely to do both). Volunteering to conserve parks was the least likely loyalty behaviour by a substantial margin, with over half the visitors indicated they were more likely to perform other loyalty behaviours rather than volunteer (Table 3, last column).

4.2. Correlations and factor analysis of the loyalty construct

The correlations between pairs of loyalty questions were generally low (Table 4). The highest correlation of 0.65 was between saying positive things (L2) and recommending (L3), with the next highest correlations of 0.45 for donating money (L6) and talking to other people about the importance of this park and other protected areas (L4) and for paying increased fees and donating money (L6). Thus, the low correlations in Table 4 suggest a number of different constructs contribute to the overarching concept of loyalty.

Results from factor analysis with one, two and three factors are presented in Table 5 to show how the loyalty items cannot be satisfactorily captured with a single loyalty construct. The three-factor result explains 66% of the variance of the eight loyalty items. We named the three factors (Table 5; see column 1 for names) 1. Visit another national park, 2. Referral and recommend, and 3. Advocate, pay, volunteer and visit again. These factors

[2] Dolnicar et al. (2013) conclude that it is not possible to distinguish between the operationalization of loyalty and those of behavioural intentions.

Table 3
Percentage of visitors more likely to perform loyalty behaviour (row) relative to other loyalty behaviour (column).

Loyalty item	L1[a]	L2	L3	L4	L5	L6	L7	L8
L1. Visit another national park in Australia		19	18	57	48	77	81	88
L2. Say positive things about this park to other people	11		10	56	51	77	81	88
L3. Recommend to friends and relatives that they visit this park	10	7		54	50	77	81	88
L4. Talk to other people about the importance of this park and other protected areas	3	2	4		36	58	62	77
L5. Visit this park again	3	8	7	30		47	53	64
L6. Donate money to help protect this park or similar protected areas	3	1	1	12	25		42	58
L7. Pay increased park fees to improve park facilities and park management	3	2	2	8	26	26		51
L8. Volunteer my time to help conserve this park or similar protected areas	1	1	1	4	12	11	22	

[a] L1, L2 etc are the same headings for the 8 loyalty items listed in column 1. Values given in columns headed 1–7 are percentages.

Table 4
Correlations between loyalty items.

Loyalty item	L1	L2	L3	L4	L5	L6	L7	L8
L1. Visit another national park in Australia	1							
L2. Say positive things about this park to other people	0.19	1						
L3. Recommend to friends and relatives that they visit this park	0.16	0.65	1					
L4. Talk to other people about the importance of this park and other protected areas	0.27	0.33	0.30	1				
L5. Visit this park again	0.17	0.12	0.20	0.28	1			
L6. Donate money to help protect this park or similar protected areas	0.07	0.19	0.27	0.45	0.40	1		
L7. Pay increased park fees to improve park facilities and park management	0.05	0.16	0.21	0.41	0.26	0.45	1	
L8. Volunteer my time to help conserve this park or similar protected areas	0.09	0.05	0.09	0.29	0.39	0.42	0.30	1

Table 5
Factor loadings for 1, 2, and 3 factor solutions (N = 328). Factor loadings above 0.5 are in bold.

Factor (names provided for 3-factor solution)	Loyalty items	1 factor	2 factors		3 factors			Mean
Loyalty behaviour factor 1. Visit another national park.	L1. Visit another national park in Australia	0.246	0.141	0.208	0.095	0.115	**0.988**	6.69
Loyalty behaviour factor 2. Referral and recommend.	L2. Say positive things about this park to other people	0.415	0.034	**0.925**	0.072	**0.930**	0.080	6.65
	L3. Recommend to friends and relatives that they visit this park	0.466	0.177	**0.696**	0.210	**0.678**	0.059	6.59
Loyalty behaviour factor 3. Advocate, pay, volunteer and visit again.	L4. Talk to other people about the importance of this park and other protected areas	**0.664**	**0.540**	0.336	**0.544**	0.293	0.190	5.53
	L5. Visit this park again	**0.505**	**0.522**	0.113	**0.516**	0.080	0.111	4.96
	L6. Donate money to help protect this park or similar protected areas	**0.698**	**0.725**	0.182	**0.749**	0.151	−0.016	4.42
	L7. Pay increased park fees to improve park facilities and park management	**0.573**	**0.564**	0.156	**0.576**	0.134	−0.021	4.11
	L8. Volunteer my time to help conserve this park or similar protected areas	0.493	**0.573**	0.028	**0.566**	0.002	0.038	3.10
Cumulative per cent of variance explained		36%	54%		66%			
Chi-squared (df)		199 (20)	33.1 (13)		15.0 (7)			
p value		0.000	0.002		0.035			

correctly capture the level of commitment required, from the lowest level of commitment required to perform the loyalty activities to the highest level of commitment required.

Factor analysis on the eight loyalty constructs suggests a single factor solution is unsatisfactory (Table 5, column 3). This single construct explains only 36% of the variability in the loyalty measures and there is significant evidence ($p = 0.000$) that a single factor is inadequate with a chi-squared statistic of 199 with 20 degrees of freedom. Two key reasons for this inadequate fit were identified. First, the relatively high correlation between saying positive things and recommending to friends and relatives (Table 4, L2 and L3) was not captured adequately by the single factor because these factors correlated relatively high with each other compared to correlations with other measures. The two-factor solution created a second factor that these two items loaded highly on.

The second reason for the inadequate fit of the one factor solution was the very low correlations between visiting another national park in Australia (L1) and the other items (Table 4) with a loading of only 0.246 with the single factor (Table 5). The third factor captured the first loyalty item: visit another national park in Australia. This item is an important aspect of loyalty to protected areas because while individual locations may be important, loyalty to 'national park' is important to managers of national park systems, as is the case in many countries. Note that loyalty to an Australian national park (L1) has loadings less than 0.3 for the other factors in the three-factor solution and to all the factors in the one and two factor solutions, suggesting this measures a different loyalty construct to the other loyalty questions. Similarly, the loadings for both the two and three factor solutions suggest saying positive things about the park and recommending the park (L2 and L3) measure a different loyalty construct to the other questions.

Allowing a third factor essentially includes visiting another national park in Australia (L1) as a separate factor on its own. If this item is removed from the factor analysis then results (not shown) are similar to those reported in Table 5, however with non-significant evidence ($p = 0.084$) rejecting the two factor solution with a chi-squared statistic of 13.9 with 8 degrees of freedom. Results after removing items L1, L2 and L3 (not shown) provide a one-factor solution ($p = 0.036$, chi-squared = 11.9, $df = 5$) with all remaining items loading highly (>0.5). The item with the highest

Table 6
Regression coefficients (p values) of variables predicting loyalty behaviours ($p < 0.05$ in bold).

Loyalty item	Intercept	International	Interstate	Overnight	Nature	Ranger
L1 Visit another national park in Australia	**5.999 (0.000)**	−0.250 (0.053)	**0.228 (0.016)**	0.173 (0.089)	0.076 (0.081)	0.004 (0.863)
L2 Say positive things about this park to other people	**5.414 (0.000)**	0.020 (0.857)	0.155 (0.058)	0.153 (0.083)	**0.151 (0.000)**	0.020 (0.361)
L3 Recommend to friends and relatives that they visit this park	**5.66 (0.000)**	−0.158 (0.23)	0.031 (0.744)	0.151 (0.146)	**0.111 (0.013)**	0.026 (0.314)
L4 Talk to other people about the importance of this park and other protected areas	**3.295 (0.000)**	**−1.009 (0.000)**	−0.217 (0.201)	−0.028 (0.879)	**0.289 (0.000)**	**0.142 (0.002)**
L5 Visit this park again	**5.276 (0.000)**	**−2.29(0.000)**	**−0.959 (0.000)**	**−0.887 (0.001)**	0.038 (0.749)	**0.190 (0.006)**
L6 Donate money to help protect this park or similar protected areas	**3.576(0.000)**	**−1.031 (0.000)**	**−0.433 (0.042)**	−0.418 (0.068)	0.021 (0.826)	**0.303 (0.000)**
L7 Pay increased park fees to improve park facilities and park management	**3.3(0.000)**	**−1.151 (0.000)**	**−0.626 (0.007)**	−0.131 (0.596)	0.113 (0.286)	**0.130 (0.033)**
L8 Volunteer my time to help conserve this park or similar protected areas	**3.035(0.000)**	**−0.687 (0.039)**	**−0.626 (0.01)**	−0.398 (0.128)	0.012 (0.914)	**0.146 (0.024)**

loading is consistently donating money to help protect this park or similar protected areas (L6).

4.3. Predictors of loyalty

Table 6 contains multiple regression results from predicting each of the loyalty measures from the visitor and visit characteristics. Relationships that are statistically significant ($p < 0.05$) are in bold. International visitors are significantly less likely to visit this park again (L5) and they are also significantly less likely to perform all the other loyalty behaviours except visiting another park, saying positive things and recommending the park (Table 6, L1–L3). Interstate visitors tend to be between international and WA visitors depending on the loyalty item; in some cases being insignificantly different to WA visitors (e.g., L1) and in other case being similar to international visitors (e.g., L8).

Visitors who want access to friendly, helpful rangers were more likely to talk to other people about the importance of this and other protected areas, visit this park again, donate money, pay higher fees, and volunteer (L4–L8). The effect was much bigger (over double) for donating money (L6; coefficient of 0.303 compared to 0.130–0.146). Effects were smaller and generally not statistically significant for visiting another national park in Australia, saying positive things and recommending (L1–L3). With regards to enjoying nature, visitors indicated they are more likely to say positive things, recommend, and talk to others (L2–L4) when enjoying nature was important to them. Whilst visitors staying overnight were significantly less likely to visit again (L5), this did not have significant effects on any of the other loyalty behaviours.

The grouping of the eight loyalty items into three factors is also supported by the regression results. For example, both the loyalty items (L2 and L3) in the second factor are significantly predicted by only the nature variable and this variable does not generally predict the loyalty items in the other factors. With only a few exceptions loyalty items (L4, L5, L6 and L7) in the third factor are significantly predicted by the international, state and ranger variables. Thus the importance of experiencing nature is key for the referral and recommendation loyalty factor while the importance of rangers is key for the advocate, pay, volunteer and visit again loyalty factor.

5. Discussion

This discussion returns to the aims of this paper; namely, to describe the loyalty visitors to Karijini and parks more generally, analyse the structure of loyalty as a construct with a particular emphasis on the constituent factors, and analyse the influence of selected visitor and visit characteristics to further understand the nature of loyalty. It concludes with suggestions for important future research directions, particularly focused on loyalty to parks more generally.

A key finding of this study is that loyalty is not a single, simple construct, a conclusion also reached by Dolnicar et al. (2013) in their meta-analysis of loyalty studies and Weaver and Lawton (2011) from their empirical research. It cannot be defined by a single item or single coherent set of items. Most visitors responded positively regarding at least three loyalty behaviours: being very likely to visit another national park in Australia, and say positive things about and recommend Karijini (means > 6). They were less likely to visit again, donate money, pay increased fees and volunteer. Rivera and Croes (2010) in their study of visitors to the iconic Galapagos, similarly found loyalty expressed through recommending, but not through intending to return. This one-off visit behaviour may typify once-in-a-lifetime destinations such as the Galapagos and the remote Karijini. Our results emphasise the importance of including intention to visit another national park in Australia (Table 1, Item L1) to access and capture loyalty to the broader park system.

A hierarchy of commitment was evident in visitors' responses to the loyalty items, with the likelihood of visiting another national park in Australia, and saying positive things about and recommending Karijini being significantly higher than the likelihood of all the other loyalty behaviours. At least 50% of visitors are more likely to perform these first three loyalty behaviours (Table 3) than the remainder. Conversely, volunteering to conserve parks, which is likely to require a significant time commitment, was the least likely, by a significant margin. Other researchers have found similarly low levels of commitment to volunteering. At South Carolina's Francis Beidler Forest volunteering received a mean score of 2.17 on a 5-point Likert-type scale (Weaver & Lawton, 2011) while at Ningaloo, Western Australia the mean score for volunteering was 2.75 on a 5-point Likert-type scale (Tonge et al., 2015). In both these studies other loyalty items such as referring and recommending had means exceeding 4.6.

This concept of a hierarchy of increasing commitment was further evidenced through the factor analysis, which also made it clear that loyalty is a multi-dimensional construct. Three factors were evident, moving from loyalty behaviours requiring a low level of commitment to those requiring a higher level: visiting another national park; referral and recommend; and advocate, pay, volunteer and visit again. These results suggest loyalty as a multi-

dimensional construct, or as a composite of several constructs (Dolnicar et al., 2013). They also illustrate loyalty to parks more generally with lower levels of commitment to the park system, evidenced through lower mean scores for advocating, paying, and volunteering in parks, than to Karijini itself and saying positive things and recommending. Visiting another park in Australia is described as one factor on its own suggesting the importance of loyalty to parks more generally (Table 5). A similar hierarchy was determined by Weaver and Lawton (2011), but through purely place-based items and research. This study extends this analysis to the park system.

Regressing visitor and visitor characteristics against the loyalty items provides some intriguing results that warrant careful consideration by park managers. People who want access to friendly, helpful rangers are more likely to donate money, pay higher fees, and volunteer. Perhaps they are willing to pay for a guide or spend money on ranger-led tours/talks. This suggests a revenue-raising opportunity that could also further enhance loyalty. The effect is over double for donating money (Table 6; coefficient of 0.303 compared to 0.130 and 0.146). This result suggests the possibility of generating opportunities for donating money that accompany the availability of rangers.

Visitors for whom enjoying nature is important are more likely to talk positively about Karijini and other parks (L2-L4). Interestingly, for these visitors there was no significant relationship between enjoying nature and visiting this park again, a finding similar to that by Crilley et al. (2012) who, for the similarly iconic, remote Kakadu National Park in northern Australia, found no significant correlation between attaining benefits from a natural experience and intention to revisit. In contrast, Kim and Brown (2012) for the more accessible Flinders Ranges in South Australia, found a significant relationship between being close to nature as important and returning and recommending. This wide variation in results strongly suggests the importance, in future research, of measuring intention to revisit and recommend as separate items and contributors to loyalty as a multi-dimensional construct (Moore et al., 2015).

6. Conclusion

So where does this leave us with loyalty research? The complexity of loyalty as a construct and of the associated measurement items evident from this study and other research efforts, including the recent meta-analysis Dolnicar et al. (2013), strongly suggest attention to four research areas. These are crucial for park management as focusing on loyalty as if it is a single concept may lead to inaccurate conclusions, such as assumptions that a proposed managerial actions will influence different loyalty actions similarly. First is the importance of building on the factor analyses in this and other recent studies (e.g., Weaver & Lawton, 2011) to better understand and investigate loyalty as a multi-dimensional construct (or a constellation of constructs). Being able to place these factors or dimensions in a hierarchy of increasing commitment is a promising direction as it helps impose order on what might otherwise be a chaotic set of items.

Second, this study's broadening to consider loyalty to parks more generally provides a starting point to move beyond place attachment as a central tenet of loyalty offering managers the opportunity to consider loyalty to their park system as well as loyalty to an individual park. For research to progress in this area requires the generation of items additional to those deployed in this study that can be used to measure the three loyalty factors. These items will need to be relevant to parks generally as well as to an individual park. They will also need to recognise and not abandon place-based aspects of loyalty, especially for repeat visitors.

Other researchers have noted the value of pursuing 'relational' loyalty, which involves directing marketing efforts towards building a 'better' relationship with the management agency, through building trust, confidence and commitment (Kyle et al., 2004). We suggest that rather than a focus on the agency, that loyalty to the system of parks and the benefits they provide be the focus. Recent research by Crilley et al. (2012) and Moyle et al. (2014) suggest a benefits-based approach, with benefits accrued and loyalty fostered through the experiences provided by parks. Thus, the research agenda would further progress the work begun by Crilley et al. (2012) with visitors to Kakadu by pursuing the link between benefits and loyalty and how loyalty to a park system beyond an individual park, is evoked.

Third is the essential investigation of whether intention to undertake a particular behaviour results in that behaviour being undertaken. McKercher and Tse (2012) found no relationship between intention to revisit and actual repeat visitation, whereas Kyle et al. (2004) relied on actual visiting behaviour in their modelling of loyalty. These contrasting results strongly support the need for future research into the relationship between actual visits and intention to visit, and other loyalty behaviours, for example between positive word of mouth intentions and actually doing so (Dolnicar et al., 2013).

Fourth, talking to other people about the importance of this park and other protected areas may be an important loyalty behaviour to be considered in future research. Behaviours such as saying positive things and recommending also involve talking but may involve other aspects like fun and learning. *Talking about the importance of parks* has a lower mean than referring and recommending suggesting it is less likely to be performed. Park managers, however, need visitors to advocate on behalf of parks so that they are adequately funded and supported politically (Taplin et al., 2016; Weiler et al., 2013). Table 2 shows that most visitors are more likely to visit another national park, say positive things and recommend, than talk about the importance of parks, so a challenge is to increase the likelihood of visitors talking about the importance of parks to the levels evident for the first three behaviours.

In conclusion, we concur with Dolnicar et al. (2013) on the basis of our empirical study, that future research efforts are required to better understand the multi-dimensional nature of loyalty and develop associated items that can be duplicated across studies. An important, new focus realised by this study, is examining loyalty to parks generally rather than just a single destination. Here we note that our interest is loyalty to parks and their benefits and *not* to the management agency, the suggested research focus by other researchers.

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Susan Moore is a Professor in the School of Veterinary and Life Sciences at Murdoch University. With a background in environmental science Sue's research areas of interest includes natural area tourism, with a particular focus on visitor research. Having an expertise in social aspects of biodiversity conservation Sue's research areas includes governance and protected area planning and management. Her research has examined visitor impacts, document human usage through spatial usage via GIS and aerial surveys, as well as evaluating visitors satisfaction and expectations. A key focus of her work is exploring human values, perceptions and attitudes as well as the social aspect of biodiversity policy, all of which are of particular importance to the sustainable management of nature based tourism. Sue currently leads the Nature Based Tourism Research Group at Murdoch University.

Kate Rodger is a lecturer in the School of Veterinary and Life Sciences at Murdoch University. Kate has extensive experience in collaborating closely with the tourism industry, in particular park agencies, and has produced technical reports on management planning, improving the sustainability of wildlife tourism, and using visitor data more effectively. Current research interests include human-wildlife interactions in the marine and terrestrial environment, identifying and minimising visitor impacts through visitor management techniques in protected areas, improving links between science and policy, and integrating ecological and social sciences in nature tourism research.

Ross Taplin is a Professor in the School of Accounting, Curtin Business School, a Senior Technical Advisor in Risk Analytics at Bankwest, and an accredited statistician (AStat) with the Statistical Society of Australia. His research interests span statistical methodology/quantitative methods, tourism, ecology, veterinary science and medicine, economics, accounting, management and banking. Within tourism, his research concentrates on visitor surveys: methods for the collection, analysis, presentation and interpretation of quantitative information obtained from visitors to recreational and tourist venues. His research concentrates on providing and improving techniques that are intuitive and accessible by management rather than those requiring a high level of statistical sophistication to correctly employ and interpret.