

# Examining the relationship between place attachment and pro-environmental behaviour in the context of national parks

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## **Examining the relationship between place attachment and pro-environmental behaviour in the context of national parks**

### **Abstract:**

A promising way to understand the process of commitment to pro-environmental behaviour is to examine how the relationship between the individual and the place is establishing. Beyond emotional bonding, the thorough knowledge of the place (destination) increases the probability that the individual will demonstrate a protecting behaviour regarding the aforementioned place (Kals, Schumacher and Montada, 1999). The positive effect of place attachment on pro-environmental behaviour, including the context of leisure activities has been proven by several studies (Halpenny, 2010; Ramkissoon, Weiler and Smith, 2013). At the same time, knowledge of the spillover effect of such changes in behaviour remains limited. The aim of this study is to contribute to filling the research gap by further examining this field. The results confirmed the positive effect of place attachment on pro-environmental behaviour. By differentiating high- and low-effort behavioural patterns, place attachment was confirmed to have a stronger effect on high-effort behavioural intentions.

*Keywords: place attachment, pro-environmental behaviour, SEM*

*Track: Tourism marketing*

## **1. Introduction**

The development of appropriate habits and behaviour of visitors plays an important role in preserving national parks. Individuals, through their leisure activities, may cause serious damage to the environment of parks, thus contributing to the degradation of protected areas. Fostering pro-environmental behaviour of visitors is a strategic goal that plays an important role in the preservation of parks (Halpenny, 2010), in promoting sustainability (Ballantyne, Packer and Hughes, 2009; Ramkissoon, Weiler and Smith, 2012), and in the long term, in the establishment of sustainable tourism (López-Mosquera and Sánchez, 2011). Visitation to national parks, in appropriate circumstances, may allow visitors to develop responsible behaviour. This is associated with several positive impacts. Pro-environmental behaviour in national parks may trigger individuals to better appreciate natural resources (Baral, Stern and Bhattarai, 2008), and in addition, the experiences and knowledge gained here may lead to the recognition of further relationships. Pro-environmental behaviour enhanced by visitations to national parks ensures the preservation of natural and cultural heritage to the next generations (Ramkissoon, Weiler and Smith, 2012).

## **2. Theoretical background of the research**

By relying on the results of environmental psychology (Bonnes and Secchiaroli, 1995) the theoretical frame of the study is partially based on the TRA (Theory of Reasoned Action) model by Ajzen and Fishbein (1980). The theory suggests that behavioural intention to act is a good predictor of actual behaviour. Behavioural intention is, among other factors, determined by the individual's attitude of behaviour. Place attachment refers to a positive emotional bond between an individual and a particular place (Low and Altman, 1992). In this study, place attachment has been examined as a second-order factor having four sub-dimensions, namely place dependence (PD), place identity (PI), place affect (PA) and place social bonding (PSB) (Ramkissoon, Weiler and Smith, 2013). By interpreting place attachment as an attitude, it has been assumed that an individual's pro-environmental behavioural intentions concerning a certain place can be originated partially from past experiences relating to the place and from the place attachment arising from these experiences (Halpenny, 2010). During the study a part of the TRA model has been tested, more precisely the effect of the attitude concerning the place (place attachment) on pro-environmental behavioural intentions.

Based on the findings by Ramkissoon, Weiler and Smith (2013) high and low effort pro-environmental behaviours have been separated and studied the interaction between certain

behaviours. Preliminary studies on this topic confirmed that place attachment has a positive effect on pro-environmental behavioural intentions both in terms of the place examined and of the level of general intention (Halpenny, 2010). Furthermore, Ramkissoon, Weiler and Smith (2013) proved that place attachment has a higher influence on high effort behaviours (for example participation in community events, volunteering in projects) than on low effort activities (waste management, decreasing consumption etc.). The study of the relationship between high and low effort behaviours has received little academic attention so far.

The other theoretical foundation of this study is based on Thøgersen's (1999) *Spillover Effect*. This theory enables us to further explain the patterns of the commitment process. Based on this theory, an individual's pro-environmental attitude or behaviour related to an area can be a good predictor of their general environmental attitude and pro-environmental behaviour related to other areas. Provided that place attachment generates a pro-environmental behavioural pattern (in this case: a high effort pro-environmental behaviour), as a result, this effect may spill over to other areas such as to low effort behaviours.

### **3. The relationship between place attachment and pro-environmental behavioural intention**

Based on the findings by Dann (1981) regarding tourism motivation, consumers are partially encouraged to travel by the attraction of the destination (pull factors). Visitation of certain destinations is motivated to a certain extent by the possible interaction with the environment there and this fact may provide special psychological, social and physiological benefits. As a result of the interactions with the destination's tourism resources, visitors may associate then undistinguished place with meanings following which an attachment can develop to the place/type of place (Tuan, 1977; Kyle, Graefe, Manning and Bacon, 2004). Literature on place attachment however points out that care for the place is rising as place attachment increases. In this vein, hypothesis H1-5 examines how a more intense attachment to national parks affects pro-environmental behavioural intentions.

- H1: Place attachment as a second-order factor positively influences pro-environmental behavioural intentions.
- H2: Place attachment as a second-order factor positively influences the visitor's low effort pro-environmental behavioural intentions.
- H3: Place attachment as a second-order factor positively influences the visitor's high effort pro-environmental behavioural intentions.

- H4: Low effort pro-environmental behavioural intentions mediate the effect of place attachment on high effort pro-environmental behavioural intentions.
- H5: High effort pro-environmental behavioural intentions mediate the effect of place attachment low effort pro-environmental behavioural intentions.

### *3.1 Data collection*

The aim of this study was to examine the relationship between an individual's place attachment and pro-environmental behavioural intentions. Research questions concerning the visitors of the ten national parks of different characteristics in Hungary were analysed in the study. Due to the number of venues to be studied, the data collection was carried out in the form of an on-line survey (CAWI) between June 17-28, 2015. The electronic survey was forwarded by market research company NRC to its panel members. The sample size was 300 persons. A filter question was applied as a condition of participation. The survey involved all respondents who have visited any of the domestic national parks for the past 12 months. As a result, the sample clearly reflects the scope of visitors visiting domestic national parks in the past year although the sample cannot be deemed to be representative either in terms of the Hungarian population or in terms of the visitors of Hungarian national parks.

### *3.2. Results of structural equation modelling (SEM)*

The method of structural equation modelling (hereinafter referred to as SEM) was applied for testing relationship between place attachment and pro-environmental behavioural intentions. This study was aimed to test a theory-based model, which enabled to work with reflective measurement models during the analyses. As a first step, the reliability and validity of the used scales and measuring model were tested. This was followed by the elaboration of a structural model and test of model fit. The model was deemed fit based on the indicators specified in the literature (Cronbach, 1951; Fornell and Larcker, 1981; Bentler, 1990; Baumgartner and Homburg, 1996; Henseler et al., 2009; Hair et al., 2010).

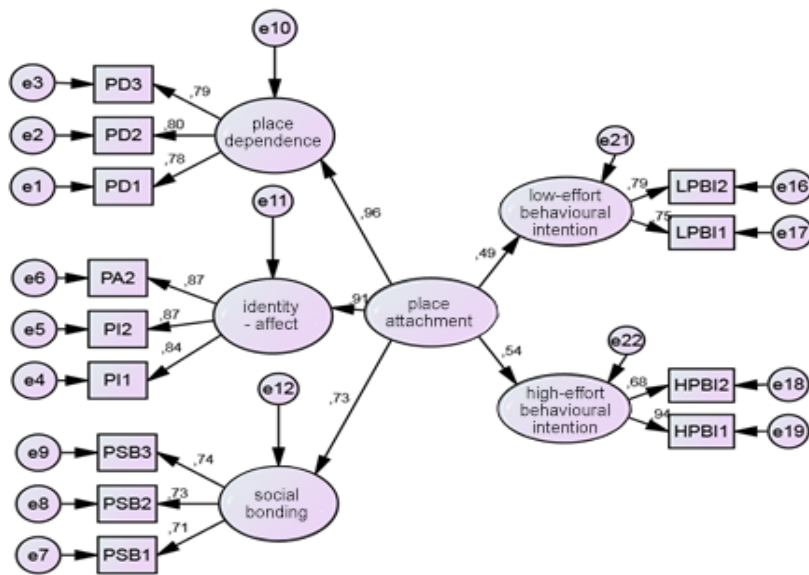


Figure 2: Structural model

Source: AMOS / own elaboration

Based on the results the effect of place attachment proved to be significant for both pro-environmental behavioural intentions. Place attachment positively influences visitors' low- and high-effort pro-environmental behavioural intentions. This result is in line with the findings by Ramkissoon, Smith and Weiler (2013) who showed that place attachment had a stronger effect on high-effort behavioural intentions. Hypothesis H1-3 assuming that place attachment as a second-order factor positively influences pro-environmental behavioural intentions was confirmed by the results, thus this hypothesis is accepted. By distinguishing high- and low-commitment patterns of behavioural intention, the following can be stated: place attachment as a second-order factor positively influences the visitor's low- and high-effort pro-environmental behavioural intentions. In the context of the relationship between the variables discussed, the direct and indirect effects between the various behavioural intentions and place attachment were analysed. The aim of this study was to provide a deeper understanding of the patterns of pro-environmental behavioural intention stemming from place attachment. In other words, the strength of effects between the variables in light of each commitment path were also analysed. The study is based on the so-called Spillover Effect (Thøgersen, 1999) whereby an individual's pro-environmental attitude or behaviour in one area can be a good predictor of their pro-environmental behaviour in other areas. Since the applied theory suggested a two-way mediating effect between low- and high-effort pro-environmental behavioural intentions, alternative models were tested and a basic model without mediating effect (model A), as well as other models analysing the mediating effect of

high (model B) and low (model C) effort behavioural intentions were defined. By introducing the mediating effect, the fit of the structural model was improved. Hereinafter, the direct and indirect effects relating to models B and C were analysed based on this result.

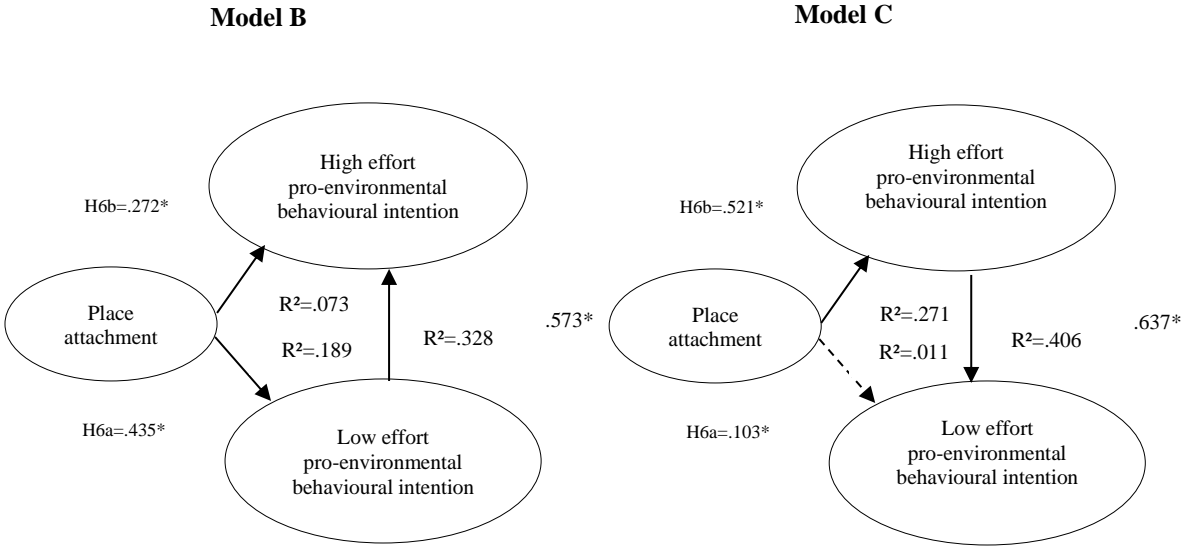


Figure 2: Illustration of effects in a structural model (models B and C)

Significant paths are marked with solid lines while non-significant paths are marked with dashed lines. \* $p < .001$

Source: own elaboration

In case of model B (see Figure 2) the full effects between latent variables studied always proved to be significant. The level of significance of the indirect effect was also  $p < 0.01$ . It can be stated that, this case shows a partial mediating effect. Place attachment has a significant strong effect ( $t = 3.378$ ,  $p < 0.001$ ,  $\beta = 0.521$ ) on high-effort behavioural patterns, and has a medium strong effect on low effort behavioural patterns ( $t = 4.953$ ,  $p < 0.001$ ,  $\beta = 0.435$ ). Place attachment equally shows a significant effect ( $t = 5.686$ ,  $p < 0.001$ ,  $\beta = 0.573$ ) on high-effort pro-environmental behavioural intentions through the low-effort pro-environmental behavioural intentions. Place attachment accounts for 7.3% ( $R^2 = 0.073$ ) of the variation of high-effort behavioural intentions while it accounts for 18.9% ( $R^2 = 0.189$ ) of the variation of low-effort behavioural intentions. Low-effort behavioural intentions account for 32.8% of the variation of high-effort behavioural intentions. Based on model C place attachment remains to have a strong significant effect on high-effort behavioural intentions ( $t = 5.504$ ,  $p < 0.001$ ,  $\beta = 0.52$ ), while its significant effect on low-effort activities disappears ( $t = 1.2$ ,  $p > 0.05$ ,  $\beta = 0.10$ ). In order to define the significance of the indirect effect, bootstrapping was applied (MacKinnon,

Lockwood, Hoffman, West and Sheets, 2002) by using AMOS software. Results suggest that the significant effect between the two variables observed earlier (in the basic model) was a result of the indirect effect. In case of model B the significant effect of place attachment on low-effort pro-environmental behavioural intentions is only manifested through high-effort intentions. Place attachment accounts for 27.1% ( $R^2=0.271$ ) of the variation of high-effort behavioural intentions while it accounts for 1.1% of the variation of low-effort behavioural intentions. High effort behavioural intentions accounts for 40.6% of the variation of low effort behavioural intentions. In summary, based on the fit indices of models B and C, as well as the total direct and indirect effects between the variables it can be concluded that a spillover effect appears in case of both commitment paths. While for model B the mediating effect is only partial, for model C the mediating effect is full. In terms of the hypotheses, the following conclusions can be drawn. Low-effort pro-environmental behavioural intentions partially mediate the effect of place attachment on high-effort pro-environmental behavioural intentions. Hypothesis H2 is partially accepted. H5: High effort pro-environmental behavioural intentions mediate the effect of place attachment on low-effort pro-environmental behavioural intentions. The hypothesis is accepted.

#### **4. Conclusion**

A deeper understanding of place attachment and pro-environmental behaviour as well as the study of factors enhancing place attachment can substantially contribute to the elaboration of policy proposals and strategies regarding the management of national parks. *The article's results confirmed the positive effect of place attachment on pro-environmental behaviour.* By differentiating high- and low-effort behavioural patterns, place attachment was confirmed to have a stronger effect on high-effort behavioural intentions. The total direct and indirect effects of the variables examined revealed that the desired behavioural intention can be better projected if the effect of place attachment unfolds in connection with high-effort activities, for example through the participation in a project relating to the operations of a national park. Low-effort behaviours such as picking up garbage left by others then ought to be considered as spillovers of high-effort activities. By examining pro-environmental behaviour patterns appearing in the sample it became visible that pro-environmental behaviour both at the place of residence and in national parks was primarily limited to low-effort activities (expected by society) while activity patterns requiring environmental activity showed less appearance. The results equally pointed out that increasing place attachment could be a promising way to



enhance high-effort activities (such as donating to or volunteering in national park related projects). In the context of visitation, relationship and demographical attributes as predictors of place attachment one can conclude that the frequency of visitations, income and age had the highest explanatory power concerning place attachment, however a significant interaction appeared in case of the region of residence, the length of relationship with the national park, childhood visitations and the local nature of visitations. Well-planned park programs that take these factors into consideration may increase visitors' place attachment more efficiently and thereby their pro-environmental behavioural intention.

One limitation of this research is that its analysis is limited to one part of the TRA model by Ajzen and Fisbein (1980), namely the relationship between attitude and behavioural intention which is completed by the examination of the spillover effect between high- and low-effort pro-environmental behaviours. A study of pro-environmental behaviour in national parks by involving further factors may demonstrate a higher predicting value while a more complex picture can be drawn by involving perceived and actual behavioural control. It should be emphasised that further testing of the place attachment construct on a bigger sample is recommended due to the overlapping of the emotional and identity subdimensions. Moreover a further qualitative examination of certain subdimensions, including the content validity of the emotional dimension, may contribute to the identification and clarification of the construct. Two particular age groups could be further analysed in more depth studies. First, the examination of the bond of children, teenagers and young people to national parks: as priority target groups of environmental education, analysing the identification of childhood interactions with protected places in particular, in connection with the effects of family, schools and NGOs is recommended. Second, in order to better understand the relationship with parks of the senior age group as a target group demonstrating closer bond as a result of their early socialization, the understanding of the narratives of this age group including their commitment paths would be emphasized. The examination of non-visitors may contribute to a better understanding of the enhancing effect of pro-environmental behaviour in national parks, by enabling a comparability between the behaviour of visitors and non-visitors. A further segmentation based on visitors' place attachment may bring about an additional research direction, namely the study of how behaviours may spill over in different place attachment groups and what type of commitment patterns are taking shape within the groups.

## 5. References

- Ajzen, I. & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliffs, New Jersey: Prentice-Hall Inc.
- Ballantyne, R., Packer, J. & Hughes, K. (2009). Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tourism Management*, **30**(5), 658-664.
- Baral, N., Stern, M. J. & Bhattarai, R. (2008). Contingent valuation of ecotourism in Annapurna conservation area, Nepal: Implications for sustainable park finance and local development. *Ecological Economics*, **66**(2–3), 218-227.
- Baumgartner, H. & Homburg, C. (1996). Applications of structural equation modelling in marketing and consumer research: A review. *International Journal of Research in Marketing*, **13**(2), 139-161.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, **107**(2), 238-246.
- Bonnes, M. & Secchiaroli, G. (1995). *Environmental psychology: A psycho-social introduction*. Thousand Oaks, CA: Sage.
- Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, **16**(3), 297-334.
- Dann, G. M. S. (1981). Tourist motivation an appraisal. *Annals of Tourism Research*, **8**(2), 187-219.
- Fornell, C. & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, **18**(1), 39-50.
- Hair, J. F. J., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate Data Analysis: A Global Perspective. 7th edition* New Jersey: Pearson Education Inc.
- Halpenny, E. A. (2010). Pro-environmental behaviours and park visitors: The effect of place attachment. *Journal of Environmental Psychology*, **30**(4), 409–421.
- Henseler, J., Ringl, C. M. & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *Advances in International Marketing*, **20**, 277-320.
- Kals, E., Schumacher, D. & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behaviour*, **31**(2), 178-202.

- Kyle, G., Graefe, A., Manning, R. & Bacon, J. (2004). Effects of place attachment on users' perceptions of social and environmental conditions in a natural setting. *Journal of Environmental Psychology*, **24**(2), 213-225.
- López-Mosquera, N. & Sánchez, M. (2011). The influence of personal values in the economic-use valuation of peri-urban green spaces: An application of the means-end chain theory. *Tourism Management*, **32**(4), 875-889.
- Mackinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G. & Sheets, V. (2002). A Comparison of Methods to Test Mediation and Other Intervening Variable Effects. *Psychological methods*, **7**(1), 83.
- Ramkissoon, H., Smith, L. D. G. & Weiler, B. (2013). Testing the dimensionality of place attachment and its relationships with place satisfaction and pro-environmental behaviours: A structural equation modelling approach. *Tourism Management*, **36**, 552-566.
- Ramkissoon, h., Weiler, B. & Smith, L. D. G. (2012). Place attachment and pro-environmental behaviour in national parks: the development of a conceptual framework. *Journal of Sustainable Tourism*, **20**(2), 257-276.
- Relph, E. (1976). *Place and placelessness*. London: Pion Limited.
- Thøgersen, J. (1999). Spillover Processes in the Development of a Sustainable *Consumption Pattern*. *Journal of Economic Psychology*, **20**, 53-81.
- Tuan, Y. F. (1977). *Space and place: The perspective of experience*. Minneapolis: University of Minnesota Press.