

93 Financing recreational trails through donations: Management challenges, visitor experiences and behavioural theory in a mountain biking context

Marie Nowak^{1,2}, Tobias Heldt¹, ¹Dalarna University, Sweden. ²Mid Sweden University, Sweden

Background

The demand for outdoor recreation has significantly increased over the last decade, and along with this the pressure on financial resources required to develop recreational infrastructure in nature areas. Fiscal and regulatory policies to generate the necessary funding are often neither ideologically nor legally accepted in countries where the right of public access applies, which is particularly broad in scope in the Nordics. Local stakeholders are thus reliant on voluntary contributions of visitors as one funding source (Sandell & Fredman, 2010). However, since these are often insufficient to cover the costs of infrastructure development, new strategies are called for to realise the benefits of trail-based recreation in the Nordics, without impeding the right to roam and the welfare of the natural environment (Sandell & Fredman, 2010).

Soft policy approaches enhanced with insights from behavioural economics may offer such alternatives (Heldt, 2005). Recent research in this field provides strong arguments that consideration of social and psychological factors can increase the effectiveness and efficiency of soft policies (Avineri, 2012; Thaler & Sunstein, 2008). Behavioural theories like the Norm Activation Model (Schwartz, 1977), Theory of Planned Behaviour (Ajzen, 2012), and Conditional Cooperation (Frey & Meier, 2004) have thus increasingly been used to study different pro-social behaviours and to inform policies accordingly (Testa et al., 2018). Despite their success in various fields, behaviourally informed policies are still rare in the management of nature areas.

This paper uses a field experiment approach to test the influence of behaviourally informed messages on the donation behaviour of mountain bike (MTB) trail users. The context is Sweden, due to the countries' unique public access rights (Sandell & Fredman, 2010). The practical research implications concern the development of behaviourally informed policies to enhance funding for recreational nature areas in public access settings. We add to the literature by testing behavioural theory to encourage

pro-social behaviour in a yet underexplored context of tourism i.e. MTB.

Research design

The field experiment took place in Rörbäcksnäs, a small village located in the Dalarna county 35km west of Sälen. Renowned for its natural trail qualities, Rörbäcksnäs has experienced significant growth in MTB visitors over the last decade. The trail management is entirely based on the voluntary work of the local sports association, which uses visitor donations collected in a 'Karma account' to finance the materials for trails. However, these are insufficient for further development. Currently, a signpost at the trail entrance invites visitors to contribute with basic information about the use of donations.

The research was conducted over an eight-month period and involved a pre-study and the actual field experiment. The pre-study included interviews and cooperation with the local community group to define their goals and barriers for MTB development. Following this, we developed surveys and counting instruments for the field experiment (baseline + treatment phase) which we conducted during MTB high season, between June and August.

The baseline condition was the existing signpost with a suggested amount and some altruistic appeals. Informed by attribution theory, NAM and reciprocity, we hypothesized that making the norm to donate salient in a message, using a descriptive norm, suggested amount and framing increases the share of donations and donation amount. Accordingly, we changed the signpost in the treatment condition. Figure 1 shows the original message on the left side, and the treatment condition on the right.



Figure 1 Donation messages accompanying the Karma account

Results

204 responses entered the analysis stage. We found that the bikers' donation behaviour was affected by the normative message. A little over 50 percent donated (any amount) in the baseline condition. In the treatment condition this increased to roughly 70 percent. A chi-square test indicated a significant difference between the share of donors, which demonstrates that the normative message affected the donation behaviour. The amount also increased from an average of 64.71 SEK to 90.50 SEK.

Results 2: Beliefs about others drive behaviour

Running a regression analysis to explain the decision to donate (discrete yes/no decision), we found the effect of the treatment positively significant at a 10 percent level, even after controlling for several other variables that might influence the behaviour. This indicates that beliefs about others drive the donation behaviour.

Our results support the thesis that normative information increase conformity (Frey & Meier,

2004). A variable capturing personal norm emerged furthermore as significant, adding positively to the likelihood of donating. The responses indicate strong personal norms in favour of donating. 'Kilometres biked' was found to be another significant variable, meaning the longer the distance biked, the higher the likelihood of donating.

Implications

Based on our finding it appears that activation of social norms to donate to MTB trails encourages higher donation rates and average donation amounts. Normative messages seem to appeal to conditional contributors while not deterring those that already endorse donations. This is consistent with our prediction and findings in other pro-social contexts (Frey & Meier, 2004; Heldt, 2005). Whilst the requirements of recreational infrastructure and existing support varies between destinations, our findings imply that normative messages can provide effective strategies to boost pro-social behaviour in a context where a certain level of social support towards funding already exists. As non-costly and freedom preserving policies, normative interventions can easily be implemented by those involved in the management of recreational trails. However, for managing a sustainable destination in which the recreational trail network is a key driver, one needs to recognize the risk of backfiring on the visitor experience if the norm is made too salient (Bolton et al., 2020).

Our study is one of few that test normative interventions in a recreational public good context, and the first that is informed by several behavioural theories and links behaviour to the visitor experience.

References

- Ajzen, I. (2012). <https://doi.org/10.4135/9781446249215.n22>. Avineri, E. (2012). <https://doi.org/10.1016/j.jtrangeo.2012.03.003>. Bolton, G., et al. (2020). https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=3294375. Frey, B. S., & Meier, S. (2004). <http://www.jstor.com/stable/3592843>. Heldt, T. (2005). <http://du.diva-portal.org/smash/get/diva2:521585/FULLTEXT01.pdf>. Sandell, K., & Fredman, P. (2010). <https://doi.org/10.1080/15022250.2010.502366>. Schwartz, S. H. (1977). [https://doi.org/https://doi.org/10.1016/S0065-2601\(08\)60358-5](https://doi.org/https://doi.org/10.1016/S0065-2601(08)60358-5). Testa, F., et al. (2018). <https://doi.org/10.1509/jppm.16.215>. Thaler, R., & Sunstein, C. (2008). ISBN 978-0-30012-223-7.