Wild is beautiful? An investigation into the links between deer exclosures and aesthetics in the Scottish Highlands

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Introduction/ Methodology

- Photos were taken at sites belonging to *Trees for Life*, a charity based in the Scottish Highlands. They aim to 'rewild' large areas of the Scottish Highlands by restoring natural processes that are currently being suppressed by deer overgrazing. In order to achieve this they have erected deer-proof fences and kick-started the regeneration process by replanting native seedlings.
- Respondents were sourced through social media and mailing lists; farmers, residents, hill walkers, tourists, photographers and Scottish residents were all asked to complete an online survey.
- Respondents were asked to view five grids, each grid contained photos of eight sites at different stages of restoration (from 0-27 years) and eight adjacent 'control' sites, with no protective fences or tree plantation. They were asked to indicate their favorite and least favorite four in order, giving a maximum/minimum score of +4/-4 respectively. They were also asked to provide up to three adjectives to the photos they liked and disliked the most. Each grid was compared between 154-175 times.
- Average scores for each photos were calculated and run through a linear regression model along with other characteristics found in the photos such as presence of water bodies and weather.
- It was found that individuals preferred the planted sites significantly more than the unplanted control sites, a trend that increased as the sites got older.

Figure 1: Location of sites within Scotland

Figure 2: An example grid used for comparison of sites by respondents

Results

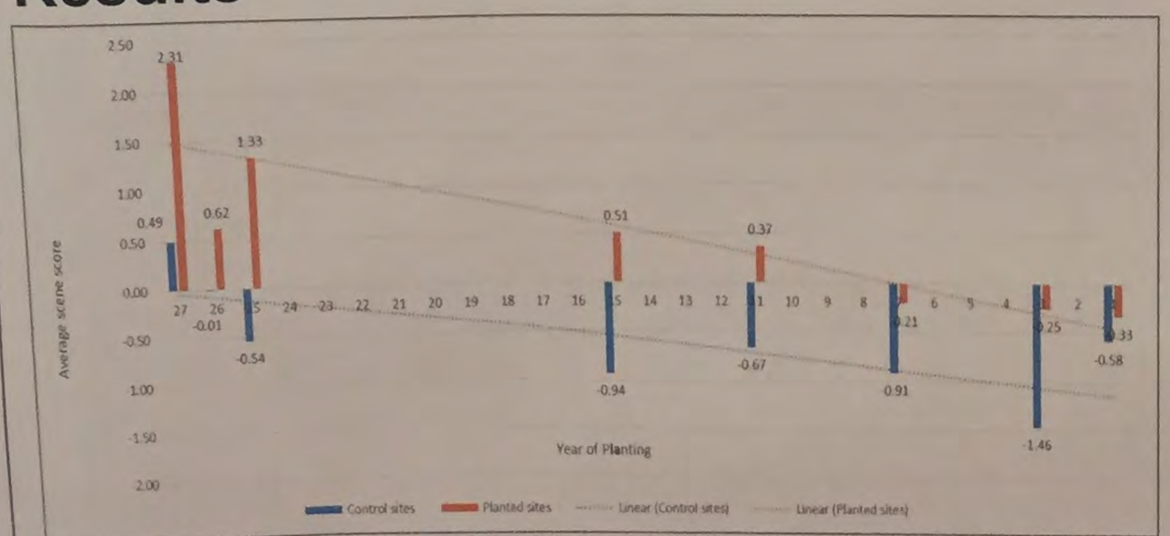

Figure 3: Graph illustrating changes in preferences since time of planting. The blue lines indicate adjacent control sites to account for other local variations such as presence of water and weather

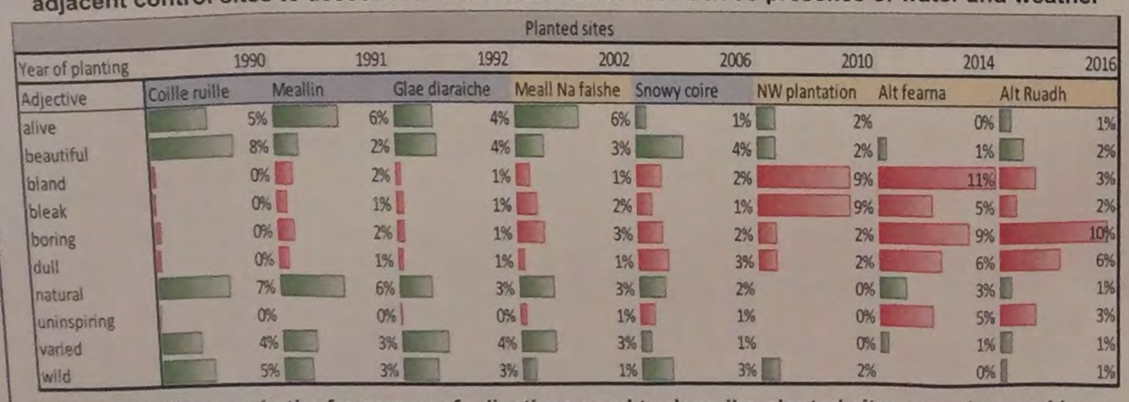

Figure 4: Changes in the frequency of adjectives used to describe planted sites over time, red bars indicate adjectives with negative connotations and green bars those with positive connotations

- Individuals were more likely to attribute positive adjectives to planted sites and negative ones to the moor dominated control sites. As the planted sites became more mature, negative adjectives decreased and positive adjectives increase.
- Presence of water bodies, weather and whether a site was planted had the largest impacts on visual preferences of respondents.
- Preferences did not change significantly between demographics or user groups.

Variable	Estimate	t value	Pr(>|t|)
(Intercept)	0.096	0.148	0.883
Planted	0.500	2.196	0.031*
Years planted	0.025	2.581	0.012*
Water present	0.842	5.470	0.000***
Vegetation land cover	-0.089	-0.374	0.710
Manmade elements	-0.263	-0.805	0.423
Type of vegetation	0.244	2.432	0.018*
Horizon	0.228	1.675	0.099.
Internal colour contrast	0.332	1.294	0.200
Scale effect present	0.106	0.625	0.534
Visibility / weather	-0.705	-3.839	0.000***

n = 80; r^2 = 0.75; r^2_{adj} = 0.72; F= 21.09 (Significance = 0.000)

Table 1: Results of the linear regression model showing the impact of each physical factor

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Scottish Natural Heritage
All of nature for all of Scotland