



## Landscape attractiveness – It depends on the observer

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Different people perceive landscapes in various ways depending on their cultural and social background as well as their own values. However, characteristics inherent in the landscapes also have an impact on their perceived beauty. Accordingly, it remains unclear to what extent personal assessments and landscape properties influence how much people appreciate landscapes. In this study, we had 50 test subjects evaluate alpine landscapes represented by 30 historic and recent rendered pictures each. Since the recent pictures should display the exact same part of the landscape as the historic ones, digital elevation models (DEMs) and orthophotos were used to render the current scene in the same greyscale range as in the historic photographs. Additionally, DEMs and landcover maps for the captured images were analysed. These results were used to explain the test subjects' values of the appreciation of and desire to travel to the landscapes using linear mixed models.

The key finding is that perceived landscape attractiveness depends more on the people assessing the landscapes than the landscape characteristics themselves. The number of distance zones (surrounding, near, middle and far zone) present in the viewshed has a significant impact on the appreciation of the landscape. The maximum slope affects the desire to travel to the landscapes, and the relief energy, the viewshed size and the ratio of the recently glaciated area influence both the appreciation of and the desire to travel to the landscape. Furthermore, the historic photographs are perceived as more beautiful than the recent rendered ones. Taking into account the ratio of the glaciated area, this difference is even more pronounced for the desire to travel to the landscape. The bigger the difference in the glaciated area between the historic and recent image is – hence the more glacier has melted – the more the test subjects desire to travel to the scene shown in the historic picture than in the recent one.