35 Motivations and spatial behaviors of urban-proximate park visitors: Complexities and interactions

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Increases in visitor use of parks and protected areas (PPAs) worldwide are challenging managers' ability to provide for a quality visitor experience while also maintaining the integrity of natural resources (Geng et al., 2021). In urban PPAs, high levels of use by a diverse population of recreationists are often observed year-round. Further, these areas often serve larger conservation purposes, such as protecting wildlife habitat, and tend to be understudied compared to larger PPAs situated in more rural areas (Hockett, Marion, & Leung, 2017; Wolch, Bryne, & Newell, 2014). Understanding visitor motivations and spatial behaviors are important for effective management of PPA resources and providing quality visitor experiences. However, visitor motivations and spatial behaviors are often studied separately, with visitor motivations studied via visitor surveys and GPS-based tracking methods utilized to examine visitor spatial behavior patterns. Previous efforts to link this data to examine differences in spatial patterns as a result of visitor motivations have proven inconclusive (e.g., Newton 2016 and Beeco et al., 2013) or focused on a single user type (Frey et al., 2018). Further, previous research examining visitor motivations and spatial behaviors has focused on a single activity type in a small sections or areas of larger, often rural, PPAs.

This study examined differences in visitor spatial behavior patterns for bikers and pedestrians as a function of differences in visitor motivation type across several interconnected, urban-proximate PPAs in Orange County, California, USA. The study area provided visitors a wide array of highly accessible destinations to engage in multiple recreation activities, including mountain biking, hiking/walking, running, and equestrian use. A paired visitor survey and GPS-based tracking effort was employed to collect data on visitor characteristics and spatial behaviors. Spatial data was collected using GPS-based tracking methods, and motivation type was derived from multivariate statistical analysis of a 36-item visitor motivation scale that appeared on a paired survey instrument. The motivation scale consisted of 36 Likert-style questions derived from the Recreation Experience Preference (REP) scale widely used to understand visitor motivations on public lands in the United States. Visitors to six different recreation areas in Orange County, CA, USA were randomly selected to participate in the research during the months of May and October, 2021. Each recreation area was sampled for three non-consecutive days between the hours of 7am and 7pm, stratified to include both weekend and weekday days. Visitors were asked to carry a GPS unit with them while recreating, and complete a survey upon the completion of their visit.

In addition to multivariate statistical analysis of visitor motivations, a three-way Analysis of Variance examining the relationship between a suite of visitor spatial behaviors and activity type (mountain bike vs. pedestrian), motivation type, and recreation area visited, and a spatial analysis of visitor dispersion were employed. Results suggest that the relationship between visitor motivations and spatial behaviors is complex. In this study, two distinct visitor types were identified based on visitor motivations-visitors motivated by immersion in nature, and visitors motivated by fitness. Visitor motivation type did influence spatial behavior patterns, but motivations were not the only factor influencing spatial behaviors. Visitor motivation type, landscape factors, and activity type all interacted to influence visitor spatial behavior patterns while recreating (Figure 1).



Figure 1. Differences in visitor dispersion for pedestrians (purple ellipse) and mountain bikers (teal ellipse) with visitor GPS-based tracking points illustrating visitor spatial behavior patterns (grey lines) for different activity types and visitor motivation clusters for two different Reserve units.

PECA Cluster 2 had no mountain bikers, thus only data for pedestrian visitors is presented in that frame.

Findings also illustrated that motivation type influenced visitor dispersion, or distribution throughout the trail system, but the patterns of dispersion (whether dispersion was higher or lower for visitors with different motivations) varied by recreation location. While these site levels differences can help land managers understand how different types of visitors are using their individual urban recreation destinations, these findings do not elucidate any consistent patterns related to how motivations alone influence behavior. Our findings do suggest that visitor motivations interact with setting attributes and visitor preferred activity type to influence spatial behavior. Moreover, these interactions are complex. Ultimately, understanding the complex nature of motivations' influence on visitor spatial behaviors can help land managers improve planning for outdoor recreation in urban areas by predicting where use may increase, how visitors might behave, and highlight locations where future research may be warranted.

References

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