

# BRIEF ENCOUNTERS WITH URBAN FORESTS PRODUCE MOODS THAT MATTER

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Good moods matter. Our moods have significant impacts on many aspects of our day-to-day lives. Moods, for example, affect productivity and health. When in a "good" mood, the cup looks half full, performance on inclusive, creative cognitive tasks is enhanced, self-esteem is high, and the immune system is strongest. When in a "bad" mood the cup looks half empty, performance on inclusive, creative tasks is impaired, self-esteem is low, and immune system resilience may be down (1, 2, 3, 4, 5, 9, 14).

Because moods have tangible and significant consequences, factors that influence moods deserve our attention. In particular, moods impacting office productivity and health have direct and potentially significant implications for urban forestry because they have fiscal implications.

The purpose of this paper is to explore the impact on mood of brief visits to an urban park and to suggest potential implications of this impact for urban forestry.

## Methods

Over 100 people were approached during April 1992 when they entered a community park. The interviewer approached visitors as they emerged from their cars, just after arriving. If visitors agreed to participate, their moods were assessed at three times: upon arrival, 30 minutes after arrival, and upon departure. In total 108 out of 186 people that were approached agreed to participate and completed all phases of the questionnaire (54% males).

People described their current moods using items adapted from Thayer's Mood Activation Checklist (11). Thayer's model of mood has four

factors: energetic (energetic, lively, vigorous, full-of-pep), tired (sleepy, tired, drowsy, sluggish), calm (placid, calm, at rest, quiet), and anxious (jittery, clutched-up, fearful, tense). Persons responded using a four point scale (definitely not, can't decide, feel slightly, definitely feel). Persons also were asked to identify up to 3 activities, from a list of 12, that best characterized what they had been doing while at the park (i.e., playing a group game such as volley ball, walking, reading, people watching, etc.) These items were weighted so as to estimate how active or passive persons were in their leisure activities. Playing a group game (such as volleyball) was rated 5; throwing a frisbee, jogging, and bicycling were all rated as 4; walking was rated as 3; reading, working, thinking, watching, or conversing were all rated as 2; and sunbathing/sleeping was rated as 1.

Other questions were asked during the interview, but they are not relevant to this discussion. See Hull and Michael (8) for a more detailed discussion of the method and theory applied here.

It was hypothesized that four possible positive mood changes could occur: TE, which is a change from feeling of tiredness to feelings of energy; AE, which is a change from feelings of anxiety to feelings of energy; AC, which is a change from feelings of anxiety to feelings of calm; and TC, which is a change from feelings of tiredness to feelings of calm. Each change in mood was operationalized for two time periods (time 1 to 2 and time 2 to 3) by subtracting the change in negative mood and adding that to the change in positive mood (i.e.,  $TE = \text{tired [1]} - \text{tired [2]} + \text{energy [2]} - \text{energy [1]}$ , for the change between times 1 and 2.

## Results

The average length of stay at the park was 90 minutes and ranged from 45 minutes to 3 hours. The second questionnaire was administered, on average, 38 minutes after initial contact. The number of people accompanying the Subject (S) varied: 38 (35%) subjects were alone, 57 (53%) were with one other, and 13 (12%) were accompanied by 2 or more. Ss varied in what they described to be their primary activity: 2.1% played a group game (such as volleyball); 15.5% threw a frisbee, jogged, or bicycled; 16.5% walked; 34% sat and read, worked, thought, watched or conversed with others; and 30% sunbathed or slept.

Figure 1 illustrates the changes in moods that occurred during the park visit. A two-way ANOVA found that the experience patterns were not significantly different from one another but that time had a significant effect ( $F = 2.1$ ;  $p < .05$ ;  $df = 7, 856$ ). This is obvious from Figure 1. The greatest positive change in mood for each experience pattern (i.e., a movement from anxiety to calm, AC) occurred in the first time period, within 30 minutes or so of arrival. In fact, for most of the experience patterns (i.e., AE, TC, and TE), staying at the park for more than 30 minutes reduces desired mood levels. This lowering of positive moods may result, in part, from people tiring after spending time out in the sun and/or expending energy through exercise.

Level of activity was significantly and positively correlated with mood changes in the first period along the AE and TE dimensions ( $r = .30$  and  $.36$ , respectively; both significant at  $p < .001$ ). This suggests that persons who engage in "active" activities experience greater positive mood changes than those who were more passive. However, the relationship was slight: the percent of covariation between mood change and activity level was modest, at best.

The correlation between level of activity and mood change in the second time period was positive for AC ( $r = .32$ ;  $p < .01$ ) and for TC ( $r = .20$ ;  $p < .05$ ). In contrast, there is some indication that activity level and mood change were negatively correlated for changes along the TE and AE dimensions in the second time period (for TE,  $r =$

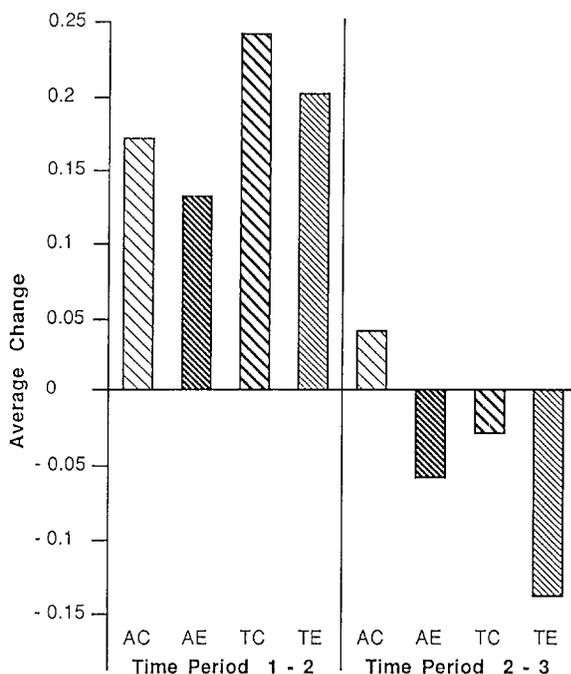


Figure 1

$-.17$ ;  $p < .1$ ; for AE,  $r = -.19$ ;  $p < .07$ ). These results suggest that active and passive park users are different in how they experience the park.

## Conclusions and Implications

Urban park experiences appear to produce positive moods in visitors. Because the data are correlational, we cannot tell from this study whether encounters with the urban forest contribute to this change in mood, but this seems the likely conclusion given the following two points: a) the type and level of S's activities explained only a small proportion of the change in mood, and b) a growing literature suggests that nature has the effect of increasing positive moods (7, 14). These results also suggest that much, if not all, of the positive change in moods occurs after brief contact.

Therefore I would like to speculate that brief encounters with urban forests produce positive moods. This has important implications for office environments, hospitals, educational setting, roadsides, and other places where people might be stressed or otherwise in a bad mood. Easy access to the urban forests, perhaps just a view of street trees from the window of a car or window of

an office, allows people to take short breaks and ease their negative moods and promote positive moods. Perhaps this is why people seek offices with windows and decorate windowless offices with posters of nature (6); window views may make it possible for occupants to glance out the window to achieve a mood "fix".

If the positive effects of views of nature are substantiated by additional research, there would be substantial motivation for companies to plant trees and otherwise make nature accessible so that employees may access it, regulate their moods, and be more productive. The implications for window views from hospitals is even more significant, and has already received empirical support. Ulrich (13), for example, found that patients with window views of trees used less medication and were discharged, on average nearly 10% more quickly than patients who had views of a brick wall. It is not possible, however, to say whether good moods contributed to this effect, only to suggest that window views of trees seem to have a significant positive impact on patient recovery.

Similar arguments for promoting easy access to nature can be made for schools, prisons, streets, and even residential communities. Take, for example, the stressed automobile commuter. Commuting is stressful and this stress reduces productivity, increases the number of sickdays taken, and has other negative consequences (11). In one study, it was reported that 18% of females and 12% of males said that while commuting they felt like they could "gladly kill another driver" (12). If roadside trees are plentiful, and if commuters' moods are enhanced by viewing these trees, then some of the negative consequences resulting from commuting stress might be mitigated. Additional research is needed to determine if these and related speculations are substantiated.

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