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Source: *Psychological Science*, Vol. 9, No. 5 (Sep., 1998), pp. 340-346

Published by: Blackwell Publishing on behalf of the Association for Psychological Science

Stable URL: <http://www.jstor.org/stable/40063318>

Accessed: 30/10/2009 13:49

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Research Article

DOES LIVING IN CALIFORNIA MAKE PEOPLE HAPPY? A Focusing Illusion in Judgments of Life Satisfaction

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Abstract—Large samples of students in the Midwest and in Southern California rated satisfaction with life overall as well as with various aspects of life, for either themselves or someone similar to themselves in one of the two regions. Self-reported overall life satisfaction was the same in both regions, but participants who rated a similar other expected Californians to be more satisfied than Midwesterners. Climate-related aspects were rated as more important for someone living in another region than for someone in one's own region. Meditation analyses showed that satisfaction with climate and with cultural opportunities accounted for the higher overall life satisfaction predicted for Californians. Judgments of life satisfaction in a different location are susceptible to a focusing illusion: Easily observed and distinctive differences between locations are given more weight in such judgments than they will have in reality.

The most famous article in the psychological literature on well-being (Brickman, Coates, & Janoff-Bulman, 1978) reported only small differences in life satisfaction between paraplegics and normal control subjects, on the one hand, and between lottery winners and normal control subjects, on the other. This provocative finding has been bolstered by much subsequent evidence in many domains (Diener & Diener, 1996). For example, Silver (1982) found that the affective experience of paraplegics was already predominantly positive only a few weeks after their accidents. A more recent study reported that the frequency of positive affect returns to normal levels within a year following the death of a loved one (Suh, Diener, & Fujita, 1996). In general, the correlations between various aspects of subjective well-being and objective life circumstances tend to be surprisingly low. In contrast, stable temperamental factors predict subjective well-being with substantial accuracy, and the correlation between the affective experience of twins reared apart is also quite high (Lykken & Tellegen, 1996). These observations led Headey and Wearing (1992) to propose that individuals are endowed with an affective set point, to which they are drawn to return after any change of circumstances.

The fame of the Brickman et al. article is a significant observation in its own right. The article is famous because its results are deeply counterintuitive: An observer would expect paraplegics to be more miserable and lottery winners to be happier than they are in actuality. We propose that this error is a special case of a more general effect that we call a *focusing illusion*: When a judgment about an entire object or category is made with attention focused on a subset of that category, a focusing illusion is likely to occur, whereby the attended subset is overweighted relative to the unattended subset. In particular, when attention is drawn to the possibility of a change in any significant aspect of life, the perceived effect of this change on well-being is likely to be exaggerated.

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The idea of a focusing illusion involves hypotheses about two psychological processes, one in the subject whose experience is predicted (the paraplegic or the lottery winner) and the other in the judge who makes the prediction (who could be the same person). The evidence implies that, to a substantial extent, paraplegics and lottery winners do adapt to their new circumstances. A redistribution of attention is likely to be one of the mechanisms that produce this adaptation: Paraplegics and lottery winners have many experiences that do not relate directly to their special status. Once the situation in which they find themselves is no longer novel, people in these circumstances often (perhaps mostly) think of other things, such as the food they eat or the gossip they hear. However, a judge who tries to imagine the life of a paraplegic or of a lottery winner will naturally focus attention on the special circumstances of these cases. This mismatch in the allocation of attention will cause the judge to exaggerate the impact of these circumstances on the subject.

It is possible to document a focusing illusion by comparing the predictions of individuals who must imagine the life satisfaction of paraplegics with the predictions of other individuals whose judgments are based on actual observation. To examine whether the focusing illusion operates in perceptions of paraplegics, we asked 119 students to complete a questionnaire about the frequency with which paraplegics would exhibit various happiness-related behaviors in specified situations. We also included a question that asked about the relative frequencies of good and bad moods. The key independent variable was another question, "Have you ever known someone who is a paraplegic?" We predicted that people who knew paraplegics would view them as happier than people who did not. The results were unequivocal. Knowing a paraplegic had a highly significant effect on responses to most questions about a paraplegic's life ($p < .005$). For example, respondents who said they had never known a paraplegic estimated a predominance of bad moods over good (43% vs. 32%), whereas those who had known a paraplegic as a friend or relative had the opposite perception (20% vs. 53%). The message is clear: The less you know about paraplegics, the worse off you think they are.

Loewenstein and Frederick (1997) found a related effect when they asked one group of subjects to predict how various personal and environmental changes would affect their well-being over the next decade and another group to evaluate how matched changes had affected their well-being over the past decade. Results showed that people expected their overall well-being to be affected much more by future changes than they believed matched changes had affected their well-being in the past. With experience, subjects apparently recognized the limited impact on well-being of specific narrow changes in their circumstances, but they were unable to put such changes into perspective when forecasting the future.

Another instance of the focusing illusion has been reported in studies by Schwarz, Strack, and their colleagues (see Schwarz, 1996, for a general summary). In one study, college students were asked two questions: "How happy are you?" and "How many dates did you have last month?" The correlation between these questions depended on the

order in which they appeared: The correlation was .12 when the happiness question came first, but rose to .66 when the order was reversed. Focusing attention on dating is apparently sufficient to induce the illusion that this aspect of life dominates one's well-being.

Counterfactual thoughts about one's own happiness play an important role in human lives: People sometimes wonder about what it would be like to be in another job, in another city, or with another spouse. Systematic errors in such thoughts can have significant consequences if individuals are moved to act upon them.

Forecasts about the well-being of other people can also have implications for action. The original motivation for this study concerned the accuracy with which people could predict the effect of a specified change in climate on the well-being of future generations. Beliefs about such effects may determine how urgent the problem of global warming appears today, and influence public willingness to take actions intended to influence the course of events. A focusing illusion would lead people to exaggerate the adverse impact of climatic changes by underestimating the ability of future generations to adapt.

In this article, we describe an instance of the focusing illusion, which was induced by causing people to focus on the difference between living in California and the Midwest. We used a cross-sectional design in which self-reports of life satisfaction made by people who lived in a certain location were compared with predictions of life satisfaction made by people who lived elsewhere. Our hypotheses were (a) that there would be no significant difference between residents of the two regions in reported overall life satisfaction and (b) that judgments made by residents of both regions would reflect a belief that "someone like them" would be more satisfied in California than in the Midwest. The results confirmed both hypotheses.

METHOD

A total of 1,993 undergraduate students at the University of Michigan ($n = 492$), Ohio State University ($n = 499$), the University of California, Los Angeles ($n = 503$), and the University of California, Irvine ($n = 499$) were recruited by professional survey firms and paid between \$7 and \$10 for a 1-hr session, depending on the prevailing rate at each university. Participants completed a self-administered questionnaire in a group setting and were randomly assigned to conditions. Each participant answered a series of questions about various aspects of life for a specified target person, who either was the participant himself or herself or was a student like the participant at one of the other universities. Half the participants were told that the survey was about the well-being of students across the country, and the others were told that the subject was the effect of climate on well-being, to prime the topic of climate.

The first block of questions about the target person began with a question about "satisfaction with life overall," using an 11-point scale ranging from -5 (*extremely dissatisfied*) to $+5$ (*extremely satisfied*). The next page included a series of questions about the target person's satisfaction with 11 specific aspects of his or her life (see Table 1), using the same scale. There were several forms of the questionnaire, in which the order of questions was varied. The second block of questions asked about the importance of each aspect of life to the well-being of the target person, using a 5-point scale ranging from 1 (*not at all important*) to 5 (*extremely important*). The third block contained demographic questions about the participant.

For the first block of questions, respondents in the *self* condition were asked: "Please circle the answer that represents how satisfied or dissatisfied you are with that aspect of life." Respondents in the *other* condition were asked: "Please circle the number that best represents how satisfied or dissatisfied a student with your values and interests at University X would be with that aspect of his or her life." For the second block of questions, respondents in the *self* condition were asked: "Please circle the number that best represents how important that aspect of life is to your well-being." Respondents in the *other* condition were asked: "Please circle the number that best represents how important that aspect of life would be to the well-being of a student with your values and interests at University X." The instructions for the *other* condition were designed to encourage the respondents to imagine how they would feel at another school, without dwelling on specific facts about their life, such as the residence of their parents or the requirement to pay nonresident university fees.

RESULTS

Demographic Variables

The samples were about equally balanced between males (47.7%) and females (52.1%) and among the four school classes (29.4% freshmen, 23.7% sophomores, 21.1% juniors, and 25.5% seniors). Samples at the different universities were generally similar, except for ethnic composition: The key difference is that the Midwest samples were 78% Caucasian and 8% Asian American, and the California samples were 25% Caucasian and 44% Asian American. The analyses we report therefore control for demographic differences between regions.

Importance Ratings

We begin with a discussion of the respondents' theory of the factors that affect life satisfaction, as reflected in the ratings of importance that they assigned to different aspects of life. The data for the two conditions (*self* and *other*) were analyzed separately, but there were few differences between these conditions (Fig. 1).

There was general agreement on relative importance: Job prospects, academic opportunities, financial situation, safety, and social life were considered most important to overall life satisfaction; variables associated with climate and cultural opportunities were less important, on average. A multivariate analysis of covariance (MANCOVA) was conducted on importance ratings for the 11 aspects, using region, priming, and item order as factors, and with gender, ethnicity, and other demographic variables as covariates. There was no significant effect of region. The priming manipulation also had no effect.

These null results were not the result of insufficient power, as several systematic differences were found between the importance ratings reported by various demographic groups. For example, females attached significantly more importance to personal safety, to academic opportunities, and to cultural opportunities than did males, whereas males assigned higher importance ratings to climate variables, outdoor activities, and social life than did females. There were also some substantial ethnic differences: African Americans and Asian Americans rated academic opportunities as more important than did Caucasians; African Americans rated cultural opportunities as more important than the other groups.

Table 1. Satisfaction ratings in the self and other conditions

Aspect of life rated	Self		Other		
	<i>M</i> (<i>SD</i>)	CA – MW ^a	<i>M</i> (<i>SD</i>)	Midwestern subjects CA – MW ^b	Californian subjects CA – MW ^b
Life overall	2.79 (1.78)	0.01	1.99 (2.02)	0.57**	0.64**
Job prospects	1.00 (2.60)	–0.13	1.50 (2.23)	0.41	0.98***
Academic opportunities	2.86 (1.79)	0.06	2.19 (2.03)	0.39	0.52**
Financial situation	0.48 (2.86)	0.08	0.81 (2.42)	–0.32	0.26
Personal safety	2.47 (2.10)	0.55**	1.54 (2.28)	–0.93***	–0.69***
Social life	2.71 (2.07)	0.23	2.35 (2.18)	0.51*	0.74***
Outdoor activities	2.32 (2.05)	0.46**	2.35 (2.19)	2.06***	0.80***
Natural beauty	2.55 (2.03)	0.88***	2.39 (2.30)	1.87***	–0.48*
Overall climate	2.01 (2.27)	2.35***	1.87 (2.55)	3.12***	2.45***
Cultural opportunities	2.12 (2.07)	0.10	1.35 (2.57)	1.27***	2.12***
Summer weather	3.04 (1.99)	0.41**	2.33 (2.47)	0.67***	1.72***
Winter weather	0.42 (3.14)	4.03***	0.80 (3.22)	4.42***	3.07***

Note. Ratings are on a scale from –5 (*extremely dissatisfied*) to +5 (*extremely satisfied*).

^aDifference between least squares means, adjusted for demographic effects, for Californian and Midwestern respondents.

^bDifference between least squares means, adjusted for demographic effects, for similar others living in California and similar others living in the Midwest.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Satisfaction Ratings

Self condition

The first column of Table 1 presents mean ratings of satisfaction with life overall, and with the 11 aspects of life, for respondents in the *self* condition. On average, subjects in the *self* condition reported themselves as fairly satisfied with their lives overall, a common finding in studies of life satisfaction (Diener & Diener, 1996). The respondents were also quite satisfied with many specific aspects of their lives, but some exceptions stand out: They were least satisfied with their financial state and the winter weather, and were less satisfied with their job prospects than with the 8 other aspects.

A MANCOVA model identical to that described for the importance ratings was conducted on satisfaction with the 11 aspects. There were several significant differences between demographic groups. For example, Asian Americans reported themselves as less satisfied than other groups with most aspects of life, including life overall ($p < .001$). Also, women were much less satisfied than men with their safety,

$F(1, 1071) = 97.20, p < .001$, and with their financial situation, $F(1, 1071) = 23.41, p < .001$.

The second column of Table 1 presents the difference between the least squares adjusted MANCOVA means of self-reported satisfaction in the two regions (California and the Midwest). These estimates are corrected for demographic differences between the two regions. The most important finding, as expected, was negative: There was no difference in self-reported overall life satisfaction between the two regions. This result was confirmed in a separate analysis of the ratings of Caucasians (the only ethnic group with enough respondents in both regions for meaningful analysis). The raw means for Caucasians were virtually identical in the Midwest (2.95) and in California (2.98).

The similarity of overall life satisfaction in the two regions is remarkable because satisfaction with several aspects of life shows significant differences, all favoring California. In particular, students in the Midwest were less satisfied with every aspect of their climate, with the natural beauty of their region, and with their opportunities for

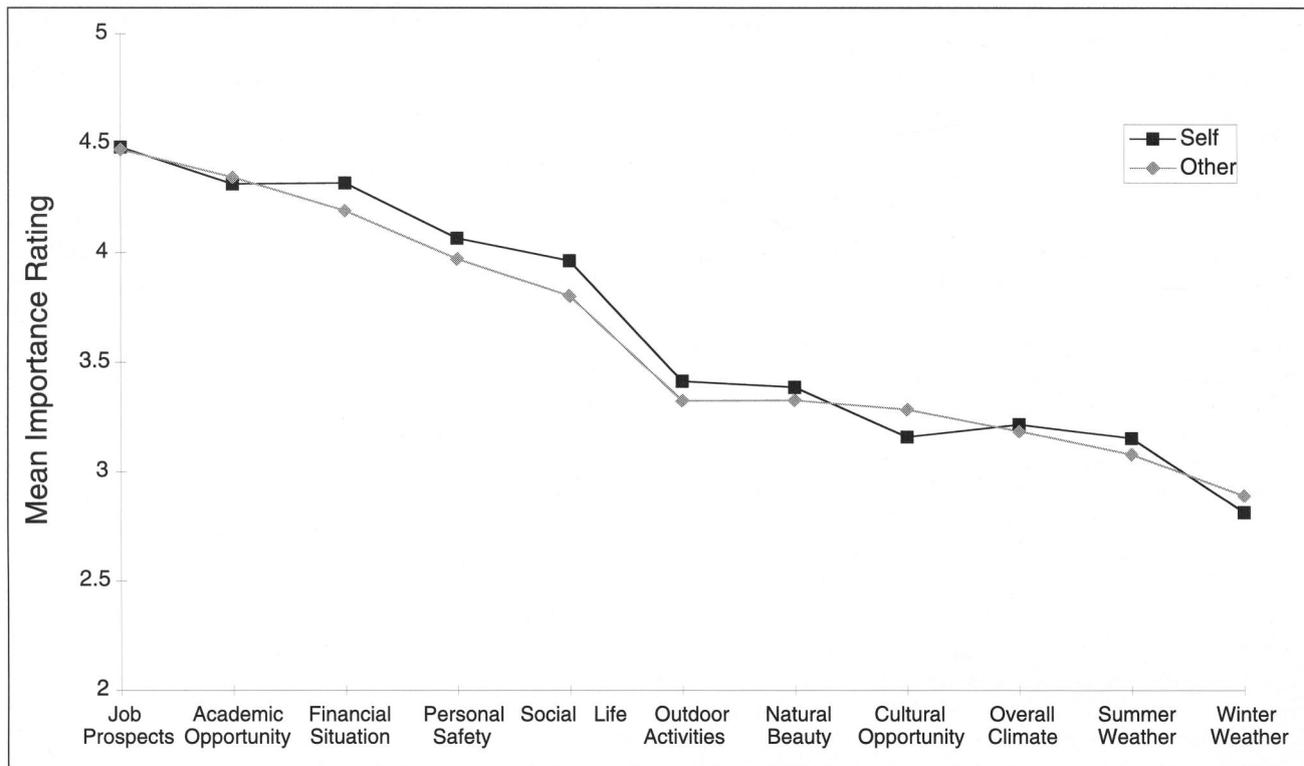


Fig. 1. Rated importance of aspects of life to well-being, for respondents in the *self* and *other* conditions. Higher scores indicate greater importance.

outdoor recreation. Although the influential hypothesis of the *hedonic treadmill* (Brickman & Campbell, 1971) is sometimes taken to imply that people will eventually adapt to any sustained state of affairs, adaptation appears to have its limits: It is not nice to be cold and wet, even if one is surrounded by others who are also cold and wet.

Why do the differences in satisfaction with climate not translate into corresponding differences in overall satisfaction with life? We propose that people do not spontaneously focus their attention on the pleasures and pains of climate when attempting to work out how happy they are. Indeed, the failure of the priming manipulation in the present experiment suggests that people do not think of climate in evaluating their life satisfaction even when they are mildly prompted to do so.

Other condition

The third column of Table 1 presents the mean ratings given by subjects who responded as they thought a student who shared their values and interests but lived at another location would. The most striking difference between columns 1 and 3 is that self-reported overall life satisfaction is substantially higher than what is predicted for a similar individual in another location, $F(1, 1977) = 88.8, p < .001$. This difference could be an instance of the well-established optimistic bias (Taylor & Brown, 1988; Weinstein, 1982): Respondents generally expect their own fate to be better than the life of similar others. However, this bias does not appear consistently in specific aspects of life, for which the results are mixed.

The main goal of the study was to examine whether the effects of region on ratings differed between the *self* and *other* conditions. To

this end, two sets of differences were computed in the *other* condition: the difference between ratings made by Midwestern respondents for someone at another Midwest university and for someone at a California university (column 4) and the same differences for California respondents (column 5). Table entries are again corrected for the demographic composition of the two regions.

Although self-reported life satisfaction did not differ for respondents in the two regions, respondents in both regions predicted higher overall satisfaction for a Californian than for a Midwesterner. This pattern of results confirms our main hypothesis, that the prediction task would reveal an incorrect belief that overall satisfaction with life is higher in California than in the Midwest. Respondents who imagined life in another region correctly anticipated many of the differences in satisfaction with individual aspects of life—especially climate. What they failed to appreciate is that these satisfactions do not loom large in people's overall evaluations of their lives. Easily observable aspects of life that distinguish the two regions are therefore assigned too much weight when people imagine life in a different place. This discrepancy is a special case of the more general bias that we have labeled the focusing illusion.

It is apparent in Table 1 that the two regions differ most in satisfaction with aspects of life rated as relatively unimportant, in both the *self* and the *other* conditions. Furthermore, it appears that the advantages of California are often overestimated, and that some advantages are perceived even where none exist. Some of these results may be influenced by a halo effect in the judgments made in the *other* condition. Alternatively, they may reflect genuine beliefs about the inferiority of life in the Midwest.

California Dreaming

Although the differences shown in Table 1 for the different groups of respondents follow the same general trends, some discrepancies are also evident. Midwesterners rated natural beauty as better in California, whereas Californians rated natural beauty as better in the Midwest. It appears likely that Midwesterners were thinking of the glories of the beaches and the Sierras, and Southern Californians were thinking of the green hills and forests that are lacking in their own surroundings. Another discrepancy is in personal safety: Respondents in the *other* condition rated the Midwest as safer, but those in the *self* condition rated California as safer. Finally, respondents in the *other* condition expected a large difference in satisfaction with cultural opportunities, favoring California, but no such difference was found in the *self* condition. We take this to be another instance of a focusing effect. There are indeed more cultural opportunities in Los Angeles than in Ann Arbor or Columbus, but their role in students' lives is probably much smaller in reality than in an exercise of imagination. Often the only thing that prompts local residents to experience outstanding local attractions is the occasional visit by friends or relatives.

Tests of Focusing

Importance

We have hypothesized that when subjects rate a similar other in a different climate, they focus on salient differences between regions (especially climate-related features), which in turn leads to an erroneous prediction that life would be better in California than in the Midwest. This focus should be manifest in ratings of importance: The aspects of life that distinguish the two regions should be rated more important in the other region than in one's own. To test this hypothesis, we averaged the importance ratings for the five climate-related

aspects to form a measure of overall climate importance and analyzed it using an analysis of covariance with one two-level factor (same or different region), and demographic variables as covariates. Results confirmed our hypothesis: Respondents in the different-region condition (mean = 3.28) rated climate as more important than those in the same-region condition (mean = 3.06), $F(1, 870) = 16.2, p < .001$. Each of the five constituent climate aspects showed a significant difference in the expected direction ($p < .01$) (Fig. 2). A similar effect was found for cultural opportunities, which is apparently another variable on which respondents perceived a clear difference between regions. Thinking of the life satisfaction of someone in a different region apparently increased the perceived importance of these distinctive aspects, without decreasing the perceived importance of other aspects of life.

Satisfaction

If rating someone in another region induces a focus on salient differences, we should expect these differences to account for the disparity between similar others in California and the Midwest in predicted overall satisfaction (Table 1 summarizes the observed differences). To test this hypothesis, we used the mediation analysis described by Baron and Kenny (1986), in which a proposed mediator is added to a regression that already includes the effect to be mediated (in this case, the region of the person rated). Mediation is established if the effect of region disappears when a candidate mediator variable is added to the equation. Taken alone, the predicted difference in overall satisfaction between a similar other living in California versus the Midwest is highly significant, $F(1, 890) = 26.6, p < .001$ (Table 2). When added to the model one at a time, four of the five climate-related aspects of life were successful as mediators (natural beauty was the exception),

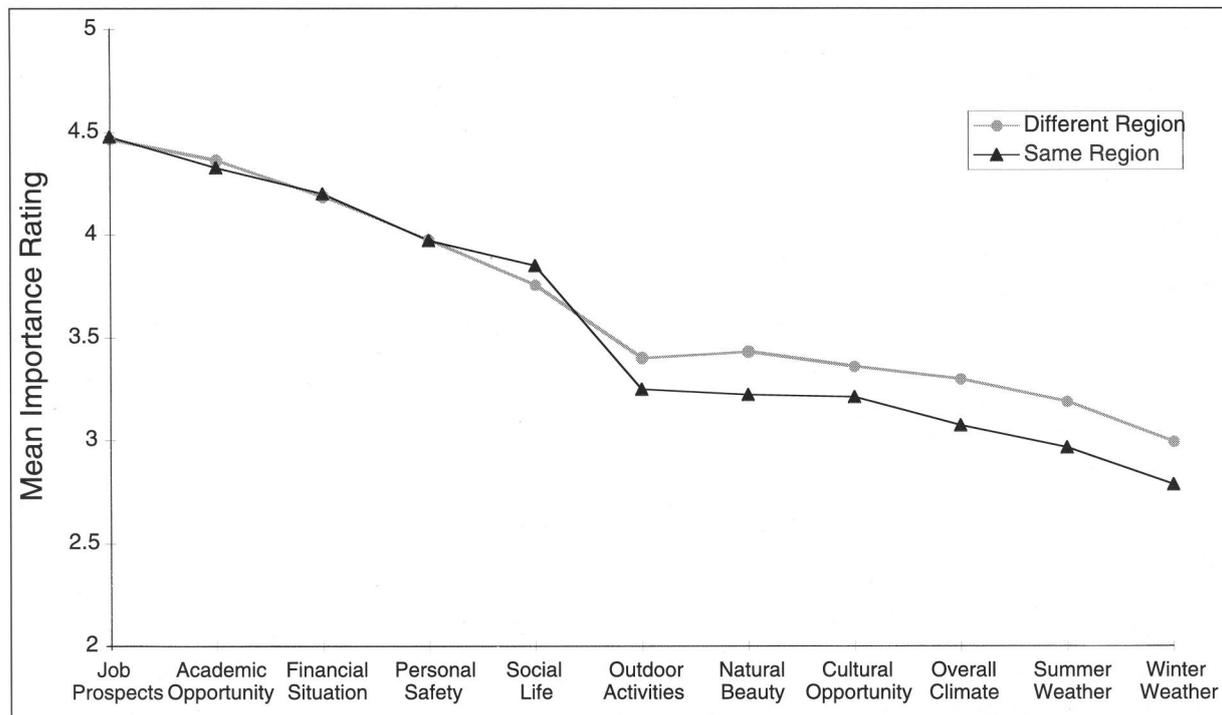


Fig. 2. Rated importance of aspects of life to well-being, for respondents who rated someone living in their own region and who rated someone living in a different region. Higher scores indicate greater importance.

Table 2. Mediation analysis of the effect of the region of the person rated on overall life satisfaction

Candidate mediator	F statistic for region when mediator added	p(F)
Effect of region with no mediator	26.6	.00
Non-climate-related aspects of life		
Job prospects	9.9	.00
Academic opportunities	15.4	.00
Financial situation	31.1	.00
Personal safety	40.8	.00
Social life	5.9	.01
Cultural opportunities*	0.1	.94
Climate-related aspects of life		
Outdoor activities*	0.5	.46
Natural beauty	13.1	.00
Overall climate*	2.1	.15
Summer weather*	2.1	.15
Winter weather*	0.2	.63
All climate-related aspects*	2.5	.11
All nonclimate aspects (including cultural opportunities)*	1.7	.19
All nonclimate aspects (excluding cultural opportunities)	7.1	.01

*Successful mediator.

each separately rendering the region effect nonsignificant ($p > .10$). Satisfaction with cultural opportunity was also an effective mediator. The remaining five satisfaction variables failed to mediate the effect, despite the fact that respondents perceived significant differences between regions on some of them. This analysis confirms the role of easily observed differences between regions, such as climate and cultural opportunities, as key determinants of the greater satisfaction predicted in California.

DISCUSSION

There appears to be a stereotyped perception that people are happier in California. This perception is anchored in the perceived superiority of the California climate, and is justified to some extent by the fact that Californians are indeed more satisfied with their climate than are Midwesterners. Nevertheless, contrary to the intuitions of our respondents, the advantages of life in California were not reflected in differences in the self-reported overall life satisfaction of those who live there.

We have argued that our respondents were affected by a focusing illusion. Our results suggest that the objective attributes of the two regions are indeed associated with real differences in hedonic experience. These relative advantages of California (or disadvantages of the Midwest) loom large when a resident of one region considers the possibility of life in the other. When people answer a question about their own life satisfaction, however, their attention is focused on more central aspects of life. An observer's failure to anticipate this shift of attention in the person experiencing the event

is a focusing illusion. We predict similar effects for any determinant of life satisfaction, which depends on so many factors that focusing attention on any one of them will inevitably cause an exaggeration of its impact.¹

The focusing illusion is not restricted to the context of life satisfaction. The psychological explanation of the illusion is that it is difficult or impossible to simultaneously allocate appropriate weights to considerations that are at the focus of attention and to considerations that are currently in the background. The fault-tree effect (Fischhoff, Slovic, & Lichtenstein, 1978) is an instance: In allocating probabilities to events (e.g., various situations that might cause a car not to start in the morning), respondents tend to assign more weight to possibilities that are explicitly mentioned than to those implicitly lumped together in the "other causes" category. A similar process may be involved in the *unpacking effect* (Tversky & Koehler, 1994), in which an explicit listing of the members of a category of events increases the perceived aggregate probability of that category. The focusing illusion may also entail an exaggeration of the importance of ideas that are currently on the agenda. A politician may take advantage of the focusing illusion by announcing small initiatives with great fanfare, encouraging the erroneous belief that these initiatives will make a substantial difference in the life of citizens.

A related observation from research in decision making is that people normally evaluate outcomes as changes, not as states (Kahneman & Tversky, 1984). Common sense suggests that recent lottery winners or the newly paraplegic will spend more of their time responding to their special circumstances in the first few weeks than they will later. Thus, if people judge what it is like to *be* a paraplegic by imagining what it is like to *become* a paraplegic, they will exaggerate the long-term impact of this tragic event on life satisfaction. A similar interpretation may apply to findings recently reported by Gilbert and Wilson (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, in press; Gilbert & Wilson, in press), who observed that people greatly overestimated the duration of their emotional response to such events as the denial of tenure and the breakup of a romantic relationship.

In the context of life satisfaction, the present discussion suggests that people may not be good judges of the effect of changing circumstances on their own life satisfaction, or on that of others. Concerning the problem that motivated this study, we suspect that people will exaggerate the hedonic impact of ecological changes such as those that may result from global warming. At the individual level, the focusing illusion may lead to unnecessary initiatives. For example, it is not unlikely that some people might actually move to California in the mistaken belief that this would make them happier. People are exposed to many messages that encourage them to believe that a change of weight, scent, hair color (or coverage), car, clothes, or many other aspects will produce marked improvements in their happiness. Some of these changes may work for some people (there is evidence that the benefits of some types of cosmetic surgery are long lasting), but there are probably many more cases in which the messages merely induce and exploit a focusing illusion. Our research suggests a moral, and a warning: Nothing that you focus on will make as much difference as you think.

1. Of course, focusing on things that actually are important makes the problem less severe.

California Dreaming

Acknowledgments—This research was supported by the Electric Power Research Institute (EPRI), Palo Alto, California. John Kihlstrom, two anonymous reviewers, and the members of the EPRI Ecological Effects research team, especially Jon Krosnick, provided helpful comments. We also thank Industrial Economics, Inc., and Ron Carrell for their able assistance with the administration of the study.

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(RECEIVED 2/16/97; REVISION ACCEPTED 3/12/98)