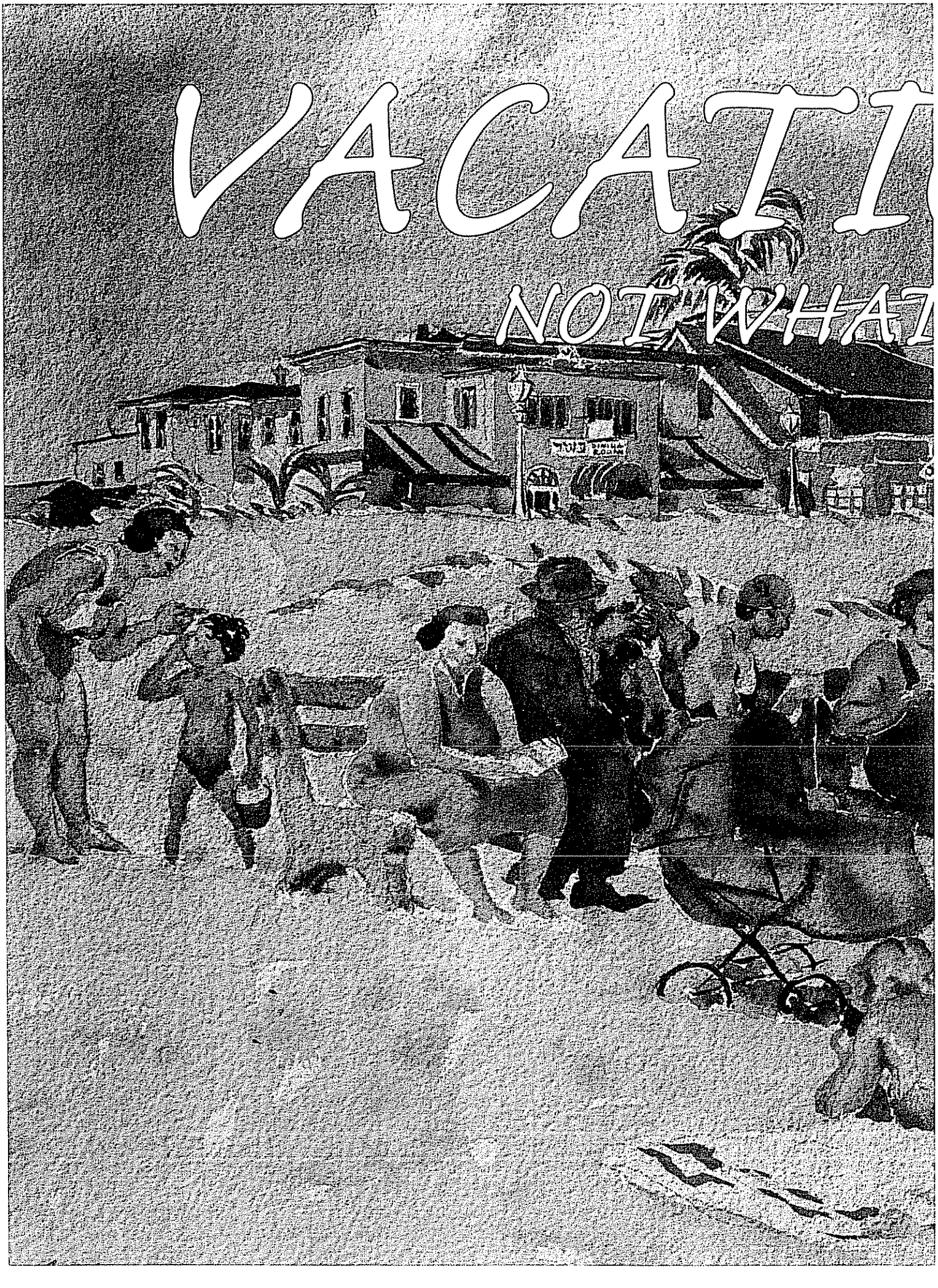
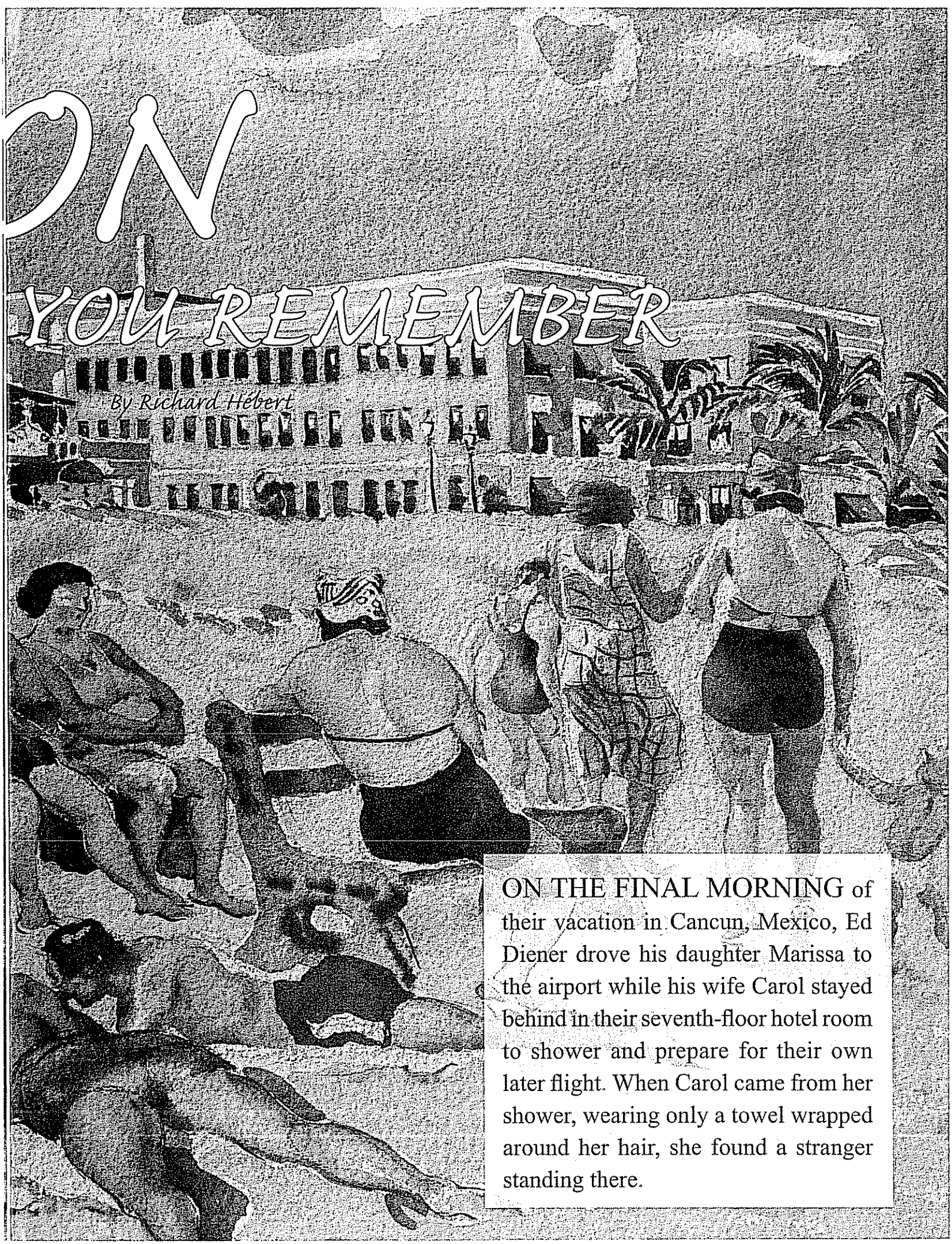

VACATI
NOT WHAT

# ON YOU REMEMBER

By Richard Hébert



ON THE FINAL MORNING of their vacation in Cancun, Mexico, Ed Diener drove his daughter Marissa to the airport while his wife Carol stayed behind in their seventh-floor hotel room to shower and prepare for their own later flight. When Carol came from her shower, wearing only a towel wrapped around her hair, she found a stranger standing there.

"They thought we had skipped out without paying and somehow had left the room locked [from inside]," Ed explained. A hotel employee had climbed onto a seventh-floor ledge from an adjoining room and made his way to the Dieners'.

Carol managed to chase the intruder away, but "I remember nothing else about this vacation," said Ed.

APS Fellow Diener, whose research specialty is well-being, used the Cancun story to underscore a key point about vacations: They are seldom the way we remember them.

"It was probably 99 percent pleasant moments," explained Diener, who is at the University of Illinois at Urbana-Champaign, "but I never want to go back to Cancun again. One brief moment ruined the entire vacation in my memory, despite the many fun moments I undoubtedly had prior to the event."

### Idealized Image

"I think all of us walk around with an image of the good life," said APS Fellow George Loewenstein, Carnegie Mellon University. "Different people have radically different images of what the good life is, and for many, when we go on vacation, we are trying to create a life that resembles what we think of as the good life. It's not really important what we do, as long as it fits into that idealized image."

# A Vacation Really Out of This World

Tourists in space? Vacationing in an orbiting space resort? A romantic honeymoon excursion, literally to the moon? It's not as far off as you might think.

In 2001, Los Angeles millionaire Dennis Tito paid an eight-day visit to the International Space Station aboard a Russian Soyuz rocket. Last year, Michael Melvill piloted the first civilian-made reusable rocket, SpaceShipOne, into space and back. This feat was repeated five days later, capturing the ship's builder, Burt Rutan, the $10 million X-Prize. (SpaceShipOne, now donated to the Smithsonian, will hang alongside Charles Lindbergh's Spirit of St. Louis at the National Air and Space Museum.)

Now comes Robert Bigelow, owner of Budget Suites of America hotels and Las Vegas-based Bigelow Aerospace, Inc., with plans to put a "proof of concept" compact, light-weight, self-inflating space station, Genesis, into space as early as this November. It will be the precursor to a 22-by-45-foot Nautilus unmanned module he plans to put into orbit by 2008, with manned modules ready by 2010 for leasing to tenants for research, manufacturing, movie-making and, yes, hotel stays.

Bigelow is betting $500 million of his own money on it and offering a $50 million jackpot to the first American to design and build a shuttle that can ferry guests to and from his space station's landing dock.

If he builds it, will they come? Definitely, says APS Charter Member Harvey Wichman, director of the Aerospace Psychology Laboratory at Claremont McKenna College. "It's clear that people will go to space and they will have a lot of fun doing it. They can't wait to do it."


Suedfeld

He points to the excitement of subjects who have participated in simulated space flights in his laboratory. After a weekend of weightlessness, "Those people were so high when they came out of that simulator, they took each other's names and had reunions," he said.

APS Fellow Peter Suedfeld, University of British Columbia, agrees that excitement will trump fear. Space tourism "will flourish," he said, "because many people are more excited by the unknown than they are afraid of it."

Space travel comes in several forms, and only long-duration flights pose truly big challenges: bone calcium loss, cardiovascular problems, disruption of circadian rhythms, speech-drowning noise (levels on space shuttles approximate the noise level of driving 60 mph with the windows open), and personal hygiene, to mention but a few.

Early space tourism, Wichman said, will range from up-and-back visits for a few minutes of weightlessness, "hardly more than an extended theme park ride"; to globe-hopping sub-orbital jaunts, say Los Angeles to Paris in 38 minutes; to Low Earth Orbits of a few days to a week or so.

Suedfeld, who has been fascinated by adventurers and science fiction since reading Jules Verne as a child, said those early trips will be "without real psychological risk. People will be back

Then reality intervenes: muggy weather, mosquitoes, sunburn, long lines, pesky children. And when it's over, we regale friends and family with tales of fun and adventure, good and bad.

That's another thing about vacations. "The worst experiences often make the best memories," Loewenstein said. Or, as Diener put it, "Some vacations are miserable, but lead to great stories."

"People expect vacations to be wonderful and derive a lot of pleasure from anticipating them," said Loewenstein, "which is just as well, because the reality is often much less ideal than the images. Vacations are doomed to never measure up. In retrospect, fortunately, our minds play games with us, and

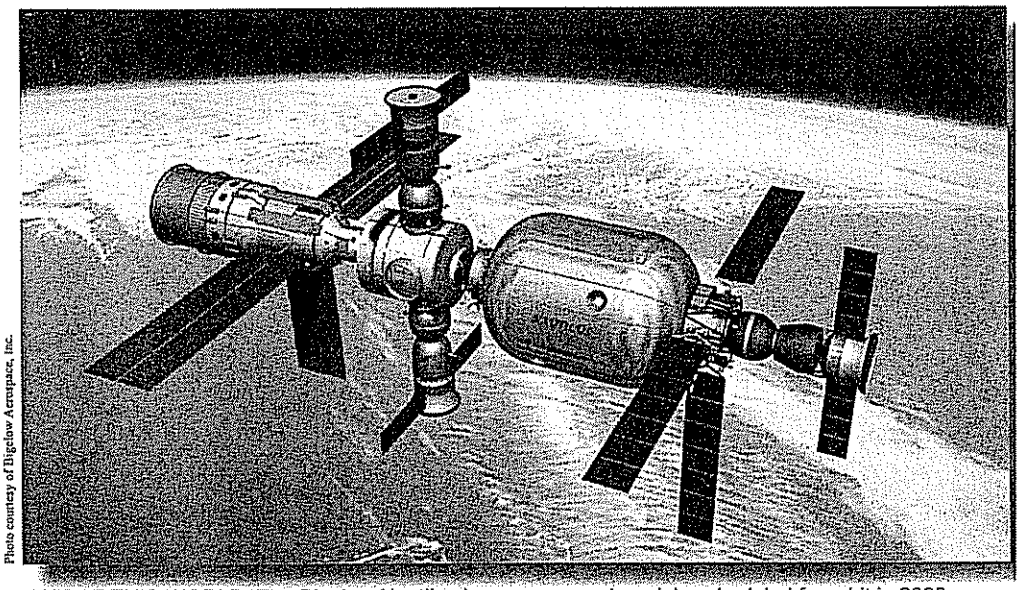


Photo courtesy of Bigelow Aerospace, Inc.

OUT OF THIS WORLD: The Bigelow Nautilus is an unmanned module scheduled for orbit in 2008.

on Earth before any of the psychological problems can arise – except anxiety about their safety, but people have that every time their plane takes off."

Civilians need little more than an hour of group dynamics training to prepare for these short space trips, Wichman discovered in his flight simulation experiments. Negative interactions during the confinements of 48-hour "flights" were dramatically fewer among those who received such training than among untrained controls.

Wichman, who came to aerospace research out of a lifelong love of aviation (he flew a Piper Cub solo while still in high school), said the main problems for space tourists will arise from weightlessness: personal hygiene when water doesn't "flow," say, or food drifting off a fork, or a sock floating away while you're changing.

"You're always obligated, anytime you see anything loose, to pick it up and secure it," he said. "You don't want stuff jamming up the fans. Fans are critical. If your fan stopped, you'd die very quickly – the air you exhale won't go anywhere.

Soviet cosmonauts, who have experienced extended stays in space, discovered another issue: when "translating" (pushing off and drifting across a room), it's important to stay oriented in the same direction as the person you're passing by, not upside-down. "People can get really irritated at translating foot to face," Wichman said.

Longer flights, a couple of weeks at an orbiting hotel or research lab, for example, will probably require simulating Earth's gravity to avoid such difficulties. Bigelow's ultimate hotel, for example, will likely be a giant gyroscope, with hotel pods at the ends of arms that extend from a recreational hub, where guests can experience weightlessness.

Beyond orbiting hotels? Wichman predicted that "within my children's lifetime" we may be carrying passengers on round-trip lunar excursions aboard a cruiser (will it be named the SS Jules Verne?) that continually orbits both the Earth and moon in giant Figure 8s, using the gravity of each to sling it back and forth. All it requires is a shuttle bus to ferry passengers from Earth to the lunar cruiser and back.

And after that? Why not inflatable habitats toted to the moon and inserted into lunar lava tubes, left behind by volcanic eruptions when the moon was young, Wichman said? "Now you have a pressure chamber on the moon, with Earth air pressure, maybe 30 feet down, protecting you from radiation. Landing on the moon and taking off is easy. The big trick is getting up to Earth orbit. After that, it's a cinch getting anywhere else."

Cinch or not, interplanetary tourism is still beyond the horizon and will require considerably more research. In fact, in 2001 the Institute of Medicine urged that the International Space Station be exploited as "the single most important test bed" for clinical research into physical and behavioral reactions to extended space travel.

Unfortunately, that's not being done, primarily because the crew was cut from seven to three; they simply don't have time for experiments. Why the cut? "The Soyuz vehicle that is used as the lifeboat, if anything goes wrong, only holds three people," explained Wichman. "The US promised the international community it would build a seven-person transport shuttle. This was a promise we made that was not fulfilled. The money wasn't available."

Suedfeld added, somewhat wistfully, "It would be nice to be able to do research on the early tourists, though." Maybe he'll get his chance on Bigelow's private space station.

**- Richard Hébert**

they reassemble themselves often into something that is pretty close to what we expected. [Later] people remember the highs and lows, but the main thing they really remember is meaning. 'That was the trip on which I met my wife.' 'That was the trip on which I almost drowned.'"

### The Rosy View

As a former mountain climber, Loewenstein often uses mountaineering to explain what might be the biggest paradox about vacation travel — why we keep going back for more despite disappointment. (See below for his own "most memorable" mountain climb.)

"People return to the miseries of the mountains over and over," he said, "in part, because they can't remember the misery of being cold, hungry, exhausted, and terrified. Mountaineers are acutely aware of this, but it doesn't help." No matter how much they remember that they were miserable on previous climbs, they cannot remember what those miseries actually felt like.

That accounts in part for the "rosy view," a term coined by Terence Mitchell, University of Washington, APS Fellow Leigh Thompson, Northwestern University, and their colleagues. This "rosy view" refers to the view of vacations as enjoyable experiences, despite the many obstacles and frustrations they sometimes present.

They found that "rosy view" reflected in three distinctly different vacation scenarios during the 1990s. Travelers on a 10-day European tour expected to enjoy themselves much more than they actually did, and later remembered it as being more enjoyable than they said it was at the time.

# Mountainous Memoirs

*APS Fellow George Loewenstein, Carnegie Mellon University, was an avid mountain climber "until I had kids and couldn't tolerate the risk." The Observer asked him about his most memorable climb.*

Maybe in 1986, when I almost killed my wife, Donna, on Mt. Assiniboine in the Canadian Rockies.

It was one of the last days of a holiday and we'd been weathered out of climb after climb.

At 4 a.m. in a hut just below the peak, we gathered with several other climbers for the final ascent. The others took one look at the weather and headed back down. But frustrated by not being able to do any decent ascents, I insisted to Donna that we should go despite the iffy weather.

Thanks to an excellent guidebook we were able to ascend the ridge in a white-out, but going down, we lost the route and ended up on the nearly vertical north face in a snowstorm that turned into a virtually continuous avalanche sweeping down and over us.

I was short-roping my wife and kicking steps and we were rappelling off things we shouldn't have trusted, like blocks of ice sticking out of the slope. Donna kept saying, "I don't want to rappel off that thing, I don't think it's going to hold." And I'd say, angrily, "Don't worry, it's going to hold. Clip in and go or we're going to be in trouble." I didn't want to say "die," though I was convinced we were going to.

We were getting more and more tense and ticked off at one another, when she suddenly said, "We're going to die, aren't we? I don't want us to die angry at each other." That cleared the air between us, if not the snow that kept hammering down on us.

Further down, her crampon detached from her boot and went hurtling into thin air, which totally freaked us out because we both expected we would be next – not to mention the difficulty of descending minus a crampon.

We finally made it back to shelter at 1 a.m. after a long frustrating search in the still-falling snow that simply reflected our flashlight beam back at us. Our friends were angry at me for putting Donna at risk, but Donna said it was a great experience and wasn't bothered at all.

I think the adventures we've had have helped strengthen the bond between us. Maybe that's another function of travel. The stresses of travel reveal inner character like nothing else. I've always been impressed with my wife's amazing fortitude when things get difficult, which happened with great regularity when we climbed together.

Photo courtesy of George Loewenstein

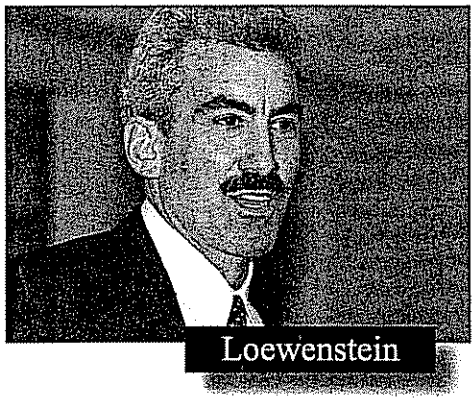
SNOWY PEAKS: A cold George Loewenstein stands atop a peak in the Canadian Rockies.

*Editor's Note: Donna, if you read this, we'd like to hear your version.*

The same was true for students home for Thanksgiving and for students on a three-week California bicycling tour. For example, only 5 percent of the bicyclers expected to be disappointed beforehand, but 61 percent said they were disappointed during the trip. Then, as early as a week later, only 11 percent remembered they'd been disappointed.

## Rewriting the Past

More recently, APS Fellow Derrick Wirtz, along with Diener and others at


Loewenstein

the University of Illinois at Urbana-Champaign, found the same among 46 students on spring break: Their predicted and remembered experiences were both more positive and, paradoxically, more negative than the experiences themselves.

Why? In addition to memory's inability to evoke past pain and other emotions, during vacations "people face a barrage of minor distractions, neither anticipated or remembered, that dilute the experience of enjoyment," Mitchell reported in the *Journal of Experimental Social Psychology*. "People [also] felt less in control ... [and] saw themselves less positively during the event than they either anticipated or remembered."

His team's conclusion: "We may choose to go on vacations, or participate in events, partly because we know we will enjoy the anticipation and recollection for a longer time than the event itself."

The spring break findings also explain why mountain climbers keep going back for more: "Remembered experience ... directly predicted the desire to repeat the experience," Wirtz wrote in *Psychological Science*. "These results suggest that although online measures may be superior to retrospective measures for approximating objective experience, retrospective measures may be superior for predicting choice."

The rosy view has a down side as well. "Rosy mechanisms may help to explain why people often seem to repeat the mistakes of the past," Mitchell cautioned. "Constantly rewriting the past in a favorable light may mean we don't adjust to the demands of the future."

## Are Vacations Good For You?

Not only do we not remember vacation experiences accurately, we don't even take the vacations we say we want, Loewenstein found. "The idea of travel looms large in the American psyche. People always talk about how much they will travel when they retire or recover from sickness, but the vast majority of Americans do pitifully little of it."

In a longitudinal study of kidney transplant patients, Loewenstein, along with Peter Ubel, University of Michigan, and Christopher Jepson, University of Pennsylvania, found that "the most dramatic misprediction had to do with travel." Before their transplants the patients predicted that a year later they would travel 27 days a year. After a year, they reported traveling only 11 days.

Academics, Loewenstein said, are no exception. "One of the main benefits [in academia] is all the time off, long summer vacations and winter vacations, but looking at the academics I know, it's amazing how many don't take advantage. They turn the best job in the world into a mediocre job."

The whole point of taking a vacation, of course, is to escape the daily stresses of life and recharge our internal batteries. But are vacations truly healthful?

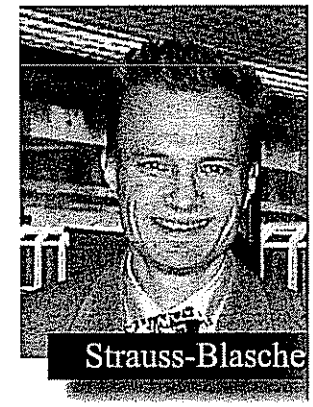
"We really don't know the answer to this," said Brooks Gump, State University of New York-Oswego. Gump, with Karen Matthews, University of Pittsburgh, conducted a nine-year Multiple Risk Factor Intervention Trial (MRFIT) that tracked 12,338 middle-aged men at high risk for coronary heart disease.

One of the things the researchers asked was whether the men had taken a vacation the previous year. It turned out that those who took more vacations had a lower risk of dying and, more specifically, of dying of heart disease. "Vacationing," they wrote, "may be good for your health."

Gump has also examined the effects of vacations on nurses. He found that the better their vacations, the better their mental health and the lower their emotional exhaustion. The results, however, suggest this may be due less to the benefits of good vacations than to the cost of poor ones. "Vacations may be good overall," Gump cautions, "but this may include a subgroup with poor-quality vacations and therefore no benefit."

## Vacations and Well-Being

Also, association doesn't indicate causation. "It is unlikely that the one or two weeks of vacation alone affect health," Gump said. It could be that simply planning a vacation buffers current stressors, or "those who take a vacation ... [have] other behaviors that all impact physical health," such as taking breaks during the workday and not taking work home.


Strauss-Blasche

"We have very little understanding of this," Loewenstein said, "because our measures of well-being are so questionable. A hint that vacations might not, in fact, be so important is that Americans get little vacation time ... [compared to people in other countries], yet come out quite high in international comparisons of self-reported happiness."

Gerhard Strauss-Blasche, of the Medical University of Vienna, said that in Austria, "We generally assume that people feel better and are more rested after vacation," but added this may be "uncommon" in the United States, where vacation habits differ.

In any event, the healthful effects don't last long. "Although it has been shown in several studies that a respite from work decreases burnout and improves mood and physical well-being," Strauss-Blasche said, "these effects just last for a few weeks, if that long."

His research team did find that spa therapy produced "remarkably long-lasting effects — up to a year," and that a three-week hiking vacation "improved positive and negative mood and subjective health as well as physiological measures like blood pressure," benefits that lasted at least seven weeks.

Among factors contributing to the perceived health benefits, "Vacation satisfaction plays a crucial role," according to Strauss-Blasche. "Satisfied vacationers show the greatest improvements of mood and well-being, whereas people not satisfied with their vacation tend to show less or no improvement of well-being. So, 'bad' vacations will not be good for us."

## Vacation Stress

Vacations can themselves be stressful, Strauss-Blasche pointed out. Long distance travel, whether by plane or in traffic, adapting to new physical and social environments, even having the family around all day can produce stress, especially for the first day or so.

When Australian researchers analyzed the diaries of 48 tourists visiting tropical islands, they found that negative moods peaked on the second and third days of the holiday. And Ad J. J. M. Vingerhoets, Tilberg University, the Netherlands, found that middle aged men with a well-known cardiovascular risk profile had increased risk of myocardial infarction during the first two days of vacation travel.

"The best part of travel is also the worst part of travel," Loewenstein said. "Both stem from its inherent unpredictability. We never know what's going to be around the next bend, which can make travel much more exciting than daily life: Anything can happen. But, that's exactly the problem and the reason so many find travel terrifying: Anything can happen."

Travel, Loewenstein said, is "one of the many ways in life in which you can only get the best if you are willing to risk the worst." Experiencing Venice in Las Vegas or riding a roller coaster may give you simulated risk, the former mountaineer added, "but for real thrills, there is no substitute for actually putting your life on the line. Of course, the problem is, if you do, you very well might lose it."

Foreign travel can be particularly challenging. "As a tourist in another country," Vingerhoets pointed out, "you may feel a bit out of control, because you do not know the language and the customs. You also have to play another role. You are no longer the boss or the employee. Nobody knows you, they approach you in a different way. You have to adjust to the totally new environment. And adjustment and lack of control are well known as stress-enhancing factors." Yet another likely reason it may be a blessing is that we don't remember vividly the stresses of our vacations.

Other than satisfaction, the most important factor in vacation well-being is "to have enough time for one's self and one's needs," said Strauss-Blasche. "When vacation does not have this quality of self-determination, vacation satisfaction is low and vacation outcome poor. Vacationers need to think about what they would like to do during vacation, what their own needs and wishes are, and not believe they have to conform to some 'holiday standard' or the travel agency's ideas."

## Bad Trip

Vacations are not only unpredictable, they are also "inherently ambiguous," Loewenstein said. A trip to the Grand Canyon, for example, might have included not only the awe-inspiring view but also rising before dawn, a long wait at a crowded airport for a delayed flight, lost luggage, and a tiring drive in a cumbersome mobile home. Was the trip good or bad?

"It seems to me that the answer depends completely on how you weight the different experiences, how you add them up," Loewenstein said. "How do you value memories? How do you value being changed in some way as a person? Maybe this unavoidable ambiguity is one of the reasons we don't learn much from experience, because it's so arbitrary how we encode the experience, and we know this at some level."

Anyway, Loewenstein said, "If a trip turns out to be miserable, you can always chalk it up to a growth experience."

Sooner or later, the wanderer must return home, where resumption of everyday chores can be stressful and, as Strauss-Blasche found, bring on at least a temporary setback in well-being.

And therein lies the vacationers' final paradox, said Loewenstein: "The misprediction and biased recall of vacations is perhaps only surpassed by the misprediction and biased recall of home when one is on vacation."

Miles from home, it is family life that takes on an idealized glow. "We forget the fights with our spouse, the trials with our children, the endless chores, and our bed at home suddenly seems infinitely comfortable and comforting," he said. "Within hours of returning, of course, there is the inevitable 'why was I so anxious to get back home?'" ♦

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