

This is a preprint of an article published in *Curator, The Museum Journal*: Gutwill, J. (2002). Exhibition Review: Risk! *Curator* 45(3).

<http://www.altamirapress.com/RLA/Journals/Curator/BackIssues.shtml>

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Risk!

Fort Worth Museum of Science and History

Dates: March 2 – September 2, 2002

Reviewed by Joshua P. Gutwill, Senior Visitor Researcher, Exploratorium

When I was asked to review *Risk!* at the Fort Worth Museum of Science and History, I first thought, “What criteria will I use to critique the exhibition? How do I decide if it was successful?” Then I thought back on the process I went through to see the exhibition, and realized I had my criterion: Was it worth the trip?

I visited the exhibition in May, 2002 when I was in Dallas for the American Association of Museums (AAM) annual meeting. To get from Dallas to Fort Worth, I had to rent a car, get a map, and find my way, thanks to a lack of public transportation between the two cities. So the question I’ll be trying to answer in this review is whether the exhibition made the hassle worthwhile, a criterion probably used by many museum visitors.

One disclosure before I continue: When I visited *Risk!*, I did not know I would be reviewing it. This review is based on my memories of the experience, as well as some descriptive materials recently sent to me by the Fort Worth museum staff. But perhaps this liability is really an asset; we often want to know what visitors remember about our museums months after they visit. Did the experience make an impression? Will they remember to tell their friends?

My recollections are fairly detailed, starting with the particularly memorable entrance. Walking along a beam on the floor of a long and narrow room, I was made to feel as though I were stepping out onto the beam of a skyscraper under construction, about fifty stories off the

ground. The room's floor, walls, and ceiling had been covered with a continuous photograph or realistic painting of such a scene, with the beam on the floor placed into the picture. It seemed a bit silly at first, but when I felt a twitch in my stomach, I realized that I had immediately been given a taste of risk. It set the context for me, as an effective entrance ought to do.

After entering the exhibition, I noticed that a school group, probably fifth grade, was inside, laughing and talking. Most of them were huddled around the "Bed of Nails," where they giggled their glee as a bed of nails raised a horizontal child three full inches off a platform. I never did get close enough to try the exhibit for myself, but I could see that the nails, although pointed, weren't hurting anyone. The exhibit seemed fun and exciting, and it was certainly interactive, but I did not overhear any conversations about risk among the kids. In fact, it wasn't until I recently received the descriptive materials that I understood that the point of the exhibit was to show that sometimes we overestimate risks.

I wandered away from the clamor of the children and made my way to a docent who was presenting the specialized clothes worn by people in risky professions. There was a firefighter's suit I could try, but I opted to don a glove of chain mail worn by shark researchers. I was surprised by the heavy weight of it, and asked how a diver could swim wearing a full suit of it. The docent kindly explained that divers are quite buoyant thanks to their air tanks, and I tried not to feel embarrassed at my naivete. Then I realized that I was simply trying to make a connection between my knowledge of swimming and diving and the visceral experience of feeling the weight of the glove. It seems to me that such an experience is just the kind we want visitors to have in our interactive exhibits.

I left the risky professions behind, and entered what seemed to be a probability section: using statistics rather than intuitions to reason about risk. This section was one of the weaker parts of the exhibition. I recall two exhibits that were particularly unoriginal and unexciting, and they were both about probability distributions. One involved rolling two dice and tracking the frequency of each number that came up, showing that seven is "lucky" because it is the most probable combination of individual die results. At the other exhibit, I flipped a nickel, keeping track of the number of heads and tails. The main idea was that random fluctuations could yield the presumably surprising result of more heads than tails (or vice versa) in any given set of flips.

As I was using the coin-flip exhibit, a boy approached and asked me what the exhibit was about. I turned up my enthusiasm and tried to engage him with the idea that I had surprisingly

counted more heads than tails with my flips, even though the chances of getting each were 50/50. He flipped the coin a few times, and even used the counting mechanism at the exhibit to track the results, but soon shrugged and walked away. I did the same. Both the dice and coin exhibits had simple, push-button mechanisms for flipping, and there was nothing special about the counting mechanisms either. These exhibits had simply taken an everyday activity and added a lengthy label to wow visitors with the so-called "surprise." I believe that successful hands-on exhibits should build the surprising or exciting element into the activity itself.

"One-In-A-Million" did just that. Confronted with a long, horizontal cylinder filled with one million red, white, and blue beads, the visitor must find the single black bead inside. I looked and looked, but never could find it! I thought the exhibit did a nice job of helping me understand the concept of one in a million in a simple, straightforward way. I would be interested to know if the exhibit sparked conversations among chronic lotto players about whether that gamble is worth taking.

Leaving the probability section, I entered what seemed like a school library, replete with study carrels containing three-ring binders of information. Not surprisingly, it was deserted. The content of this section focused on a variety of risk-related topics, from how advertisers sell products by manipulating our sense of risk to how ignorance of risk can lead to environmental disasters. While the content in this area was interesting, relevant, and important, the format was overwhelmingly unattractive. I wondered why this worthy content had been relegated to books rather than been used to form the core of actual museum exhibits. Perhaps visitors could have had the opportunity to create advertisements for risky products on a computer, and then try to "sell" the products to their friends or other visitors.

In other parts of the exhibition, I tried three such computer exhibits, and was drawn in each time. At "How Old Are You Really," a computer asked my age and then posed a series of questions about my risky habits. Do I smoke? Do I drive a car? Each time I answered a question, the computer recalculated my "age" by adjusting for my risky behaviors. I could see that I was getting older or younger depending on each answer. It was fascinating, and brought home to me in a clear way how my actions might extend or shorten my life. Later, I overheard a mother and daughter using the exhibit, and the daughter was disappointed that she didn't get older. I smiled and moved on.

At the second computer interactive, "Rate the Risk," I got to try rating different activities from less risky to more risky. How risky is driving a car, flying in an airplane or building a nuclear reactor? At the end, my ratings were compared to results from a national survey of people rating the same activities. The comparison was interesting, but I would have liked to see how specific individuals from different walks of life would have rated each activity. How would a statistician rate the risks, compared to an airline pilot, car salesperson, or nuclear engineer? Still, the exhibit got me thinking about the criteria I use to rate risky activities, and I realized that I often have no real data to support my choices.

"Will I or Won't I," was the most intriguing computer interactive for me. The task was to make investment decisions to ensure that I would retire with a nest egg of \$1 million. At what age would I start saving? How much would I squirrel away each month? How aggressive would my investments be? The beauty of the simulation was that no matter what choices I made, there was still some risk that I would not attain the million dollars. After making all my choices, I was shown a percentage that reflected the chances of achieving the million, which was then transferred to a roulette wheel. Through what I thought was a fairly tacky slot-machine pull-lever, I started the wheel spinning to see whether I was lucky enough to achieve a million dollars in savings. The exhibit did a nice job of getting me to think about the risks involved in investing, even over a thirty year span, and I pondered the ramifications all the way back to Dallas.

Among the computers was an interesting exhibit showing two automobile dashboards, one from the 1970s and another from the 1990s. A father and son were at the exhibit, and the father was explaining how the older dashboards didn't have airbags or collapsible steering wheels. The son was focused on the AM radio of the old dash, and why the steering wheel was so large. It was the kind of conversation I would want to hear at an exhibit on the reduced risk of modern-day dashboards.

Finally, I found the exhibit element that I had heard about at AAM: the *Risk!* video theater. I sat down in the low light and was amazed by the quality, depth, and emotional content of the thirteen-minute video. Shot in a documentary style, the video presented seven people who engage in high-risk behaviors as part of their profession or avocation. It began with Beck Weathers, a man about whom I had read in *Into Thin Air*, Jon Krakauer's chronicle of an ill-fated expedition to the top of Mt. Everest in the spring of 1996. In one stormy night, eight people lost their lives. Weathers himself got lost on the summit, and ended up unconscious, frost-bitten and

face-down on the ice for sixteen hours. The next morning, by some miracle, he wandered into camp and was rescued off the mountain. To see him in the video with his reconstructed nose, talking about why he takes risks, was incredibly powerful for me. In addition to Weathers, there was a racecar driver, an astronaut, a bullfighter, a crab hauler, a firefighter, and a woman who dances on the faces of cliffs and skyscrapers.

The video focused on several questions: What is risk? How do you deal with it? Why do you take these risks? The risk-takers spoke eloquently of living life to its fullest, and stated their shared belief that risky behavior reminds them of all they have to live for. The stories and perspectives offered by these seven people prompted me to evaluate the risks I take in my own life. I began to wonder whether I take enough risks, whether I challenge myself the way these seven obviously do. Am I living my life to the fullest?

The filmmakers knew how to connect to my emotions. Not only did they choose people from risky professions, but the astronaut they spoke with was a school teacher who had been Christy McCauliffe's backup in 1986. During the video, we saw Christy preparing for her doomed flight into space, and the risk of being an astronaut came into sharp focus. The firefighter in the video was a woman from the New York Fire Department who had been at ground zero on September 11, 2001. Hearing her talk about her experience, I began to choke up, and I hoped that the small theater was dark enough for no one to notice. I am still amazed that a film shown only eight months after 9/11 contained an interview of a firefighter from ground zero.

After the video ended, I was done. I felt satisfied with my experience in *Risk!*. Emotionally stimulated and intellectually engaged, I had considered the issue of risk from various angles. Was it worth the trip from Dallas?

You bet.