



The Stories We Tell About Meaning Making

by Michael Spock

Michael Spock is a Research Fellow at the Chapin Hall Center for Children at the University of Chicago, where he is conducting research on learning in museums and other informal settings; and is also a consultant to museums and funding agencies on exhibits, programming, planning, and administration. He may be contacted at: spock-michael@cbmail.spc.uchicago.edu

**What does it take to
create really
meaningful exhibits?
And why do our
efforts so often come
up short?**

**It sometimes takes a while for the
full meaning-making potential of
an exhibit experience to ripen.**

I grew up in New York. By the age of eight I was on a pretty long leash and explored the city and its museums on my own. Surprisingly, one of my favorite destinations was the Museum of Modern Art. Old movies in the basement, sometimes accompanied by a live pianist, but always punctuated by the rumble of the passing subway, and two memorable exhibits, all attracted me.

One of those memorable exhibits was an exhaustive exploration of the esthetics and science of maps and map making, which I learned many years later was created by Bauhaus designer Herbert Bayer. Everyone was following the war through maps in newspapers and magazines. The exhibit was experiential, but there were no buttons to push. I could make 3-D landscape images pop out of two slightly different photographs with a stereoscope. I could fly over a city by walking a bridge suspended across a room-sized aerial photo. I could stretch a string over the surface of a globe between New York and London to discover, counterintuitively, that the shortest route is a curved line through Newfoundland on a Mercator projection. I learned that conic and cylindric projections are literally the projection of spherical images onto plane surfaces by slipping translucent plastic cones and cylinders over small, internally lit globes. (The connection between the mapmaker's notion of a "projection" and the physicist's optical and geometric use of the same word only came to me in a flash a few years ago, but was based on that fifty-year-old experience.)

There were other illustrative models that showed how you can peel and flatten out the skins of oranges to get several more or less distorted map forms; and there was an enormous version of Bucky Fuller's brand new Dymaxion Globe on display that could also be bought as a kit to cut out and assemble at home. But the most intriguing exhibit was a transparent outlined globe that had a pinhead suspended at its center so that you could see, by lining the pinhead up with New York, whether you would come out in China if you dug a hole down through the center of the earth; which of course was a question of deep, if uninformed, speculation among my friends.

Whether from reconstructed or "true" memories, I believe I can still recapture nearly every detail and idea from this wonderful exhibit. Several years ago, at the meetings of the Association of Youth Museums and the American Association of Museums, Hope Jensen Leichter, Deborah Perry, John Paterson and I asked our colleagues to tell us their stories about pivotal learning experiences in museums as part of an exploratory research study. Many did. The stories sound a lot like the anecdotes I like to tell—sometimes strikingly so. So I'd like to spread a collection of our tales before you and see if we can use them to tease out a few ideas about what it takes to make meaningful exhibits—exhibits that really work.

Let's begin with a story Rita Organ told us, that also corresponds with one of my memorable encounters.

Well, the most memorable museum experience I have ever had is when I went to the Smithsonian, at the National Museum of American History. And in the *Field to Factory* exhibit there...was a station...where there was a "white" door and a "colored" door. And I stood there for the longest time not knowing which door to walk into.

And it was effective. I mean that was something that stopped me in my tracks. I mean I was born and raised and always considered myself an African-American, but for the first time I actually thought about my white ancestry that was so far back in generations. And it just kind of stopped me in my tracks. But then I went ahead and I walked in the "colored" door. I figured I had to



go with what I knew. And...I will always remember that, because it was something so simple and yet so very, very effective for me as an African-American.

And for me as a white American. The “colored” and “white” doorways also stopped me in my tracks and forced me to decide whether I would defy Jim Crow or play my expected role. Rita and I were both focused on the central theme of this exhibit unit: how would we have responded to the social constraints of the time? As Rita said, “It was effective.”

Rather than being passive receptacles, Rita and I, as visitors to the map exhibit and *Field to Factory*, were asked to contribute to—even help create—the exhibit experience. We were challenged to map routes and choose doorways. We were presented with problems and expected to solve them. We had to think and do things. In other words, the exhibitors turned much of the responsibility for the outcome of the experience over to us.

Constructivist learning theory posits that all meanings are constructed by the learner from the exterior environment—our museum exhibits, programs, messages—working against and within the interior context of the learner’s past experiences and conceptual frameworks. So deep meanings are made through the dynamic interaction of exhibitors and visitors with each other, not by delivering prepackaged messages to passive receivers.

Incidentally, after a long struggle with myself, I went through the “white” door, as directed, and am still wondering whether I did the right thing. Sometimes the push to participate is less direct and the accommodation asked more subtle. Phyllis Rabineau told a story about a softer challenge presented by an unfamiliar setting.

I must have been about six years old, seven years old. My father was an architect, so we were all interested in looking at architecture. And I remember, they built a Japanese house in the garden of the Museum of Modern Art. And I remember going to see this house. And what was so wonderful about it was that, as you walked into it, you took your shoes off and they gave you little slippers, so that as you walked on the tatami mats, you weren’t wrecking them with your shoes.

But it was a very exciting thing to me to be in this setting and to be asked to take my shoes off and given these little shoes and walk on these surfaces. I can still remember what it felt like and smelled like, and to have these beautiful spaces that were so empty, and so calm and so beautiful in the middle of the museum garden there. So, I always remembered that.

The Japanese house also had deep resonance for me when I visited this temporary installation as a college student. While the house was alien territory—different from any space I had negotiated before—I felt strangely at home. This was a place I could live.

With its subtle embrace, the house drew Phyllis and myself into a new world that was somehow accommodating to the naive perspectives we brought to these unfamiliar surroundings. For the exhibit’s developers had, by the seemingly straightforward (but for the 1950s quite novel) device of asking us to take off our shoes, enter and “live” within the house, helped us make meaning of something that could have easily held us at arms length. Remember the railings blocking the doorways of period rooms. So constructed interactions aren’t always triggered by overtly challenging or deliberately interactive devices.

Sometimes meaning takes time in the making. Fred Stein told a fascinating series of stories that illustrated this notion. Here is one of them.

I grew up in the Bay Area in California and remember really clearly playing with a particular exhibit at the Lawrence Hall of Science that had ramps on hinges so that they would alternatively be bridges or valleys, and bridges and valleys, and bridges and valleys. And this machine would go up and down. And you could control the rate at which the bridges would turn into valleys, and there would be balls rolling around. And the point...I thought was...to get the right rate, so it just got faster and faster and faster and faster and faster. But I just loved letting the ball run around and trying to see what I could do with it. And I liked watching it and listening to it.

Deep meanings are made through the dynamic interaction of exhibitors and visitors with each other.

And I put it out of my mind for about twenty years, until I was in a physics class and found out what a cyclotron was. And all of a sudden I realized that I had a model, a real visceral physical model, of what a cyclotron did, and what each of these electromagnets did to the part—to the charged particles floating around. And each of these little valleys was like the magnet accelerating it down hill all the time, and it gave me a way to understand a cyclotron. And I don’t think any other way could have. And it struck me as being important that this had stayed in my memory for more than twenty years. Just because I thought it was fun to make this ball try to go fast. So that’s my memory. I must have been ten or eleven years old when I did that.



My fifty-years-late-to-arrive insight about the map projections is another example of this maritative process. We both had to wait for the next triggering event to be able to construct yet another meaning from what had already been a rich experience the first time around. In other words it sometimes takes a while for the full meaning-making potential of an exhibit experience to ripen.

Andrew Ackerman told us a story where the meaning of the exhibit experience could not be initially assessed, even though its impact, unlike the cyclotron model's and map projections, may have been more immediate.

About three years ago the Children's Museum of Manhattan opened a large exhibit about collecting. It was four or five thousand square feet and very well received. A friend of mine brought her nine year-old son to the museum to see the show because she thought he would just absolutely be thrilled with it. Much to her dismay, her son went through the exhibit in all of five minutes. And she was kind of crushed by the experience; she thought the amount of time he spent in the gallery was probably proportionate to how much he got out of it.

Can we really create exhibits that make meaning?

And the kid didn't show any signs of an impact of that experience until about two months later when she walked into his room and she saw that he had reorganized everything in his room into collections. That five minute experience in that Collecting Experience had crystallized something in that child's mind. It took two months to come out. That's a nine or a ten year-old, not a young child. And since that time he has become a collector, to the point of which she has called me back to complain about the impact of that exhibit, because there was no longer any room in that child's room for anything else but his collections.

What if we tried to evaluate the full impact of these two kinds of exhibit experiences right after the encounter? The meaning of the collections exhibit appeared to be undetectable, and the full meaning of the map and cyclotron exhibits were undeveloped. We are so results-driven that our conventional assessments may miss some of the most interesting outcomes of our work.

Sometimes meanings are not made through the sophistication of the exhibit presentation. Kathy McLean told a story about an exhibit experience where the enthusiasm of the exhibit maker read through and carried her, as a casual visitor, into a meaningful experience.

One that really stuck out as...one of the best exhibitions I have seen was in—St. John, I think is the name, in Antigua in the Caribbean. And it was the day that I was going home, and I had a couple of hours to kill...So I went into this little history museum.

And it was a really funky little museum. Hand labels, and obviously maybe spent five hundred dollars on the whole exhibition. But as I kind of moved through it, it just sucked me into this...island experience. It was the history of the island. And there was something so profound about it, because it had a personal voice, and it was clearly created by one person who truly loved that place. And who was telling me a story that really made me feel like this was a very important place that I should care about, and look out for, and remember as a special place.

And it was really great, because they even had little interactive things. Like they had a little question and answer thing where you could match things up by sticking — there was a nail on a string, and you could stick it into a little hole and a little light would light up. But they didn't have enough electricity to do that, so there were wires that came down to this big battery sitting on the floor, and that's what powered the interactive.

Great little stories about people that lived on the island, and great little labels like "This was my father's something-something-something." You never heard who the "my" was. But it was such a great experience. And I wrote them and asked them for photographs. You know, I don't think they ever got the letter. You know, just another one of those really ephemeral things, but it was a great exhibition.

Although this was not a polished exhibit it was a compelling experience. The exhibitor overcame our most familiar limitation—the lack of deep resources—by unselfconsciously allowing her personal interests and passions to read through. She captured Kathy in her orbit and made meaning for us all. So some of the most meaningful exhibits are also the most personal. They have a voice. A real person made the exhibit, and so we make a personal connection to them through their exhibit.

My late friend, Steve Borysewics, told us a similar story about an even more primitive, but still memorable exhibit.

I remember going to this really horrible little museum in Galena Illinois when I was a kid...It was like a junk store almost. Things on racks. And you could touch everything, which is kind of weird...



But there was...a sword in this rack and it had a cork stuck on the tip of it, like a bottle cork. And the label said, "This sword was used to pierce a rebel soldier's heart." And, just having that cork on there was just this perfect connection between like a piece of text, *and* detail about the use of this thing and the business end of it. This is the end that went into a guy and we have to cover it up because it's so sharp and dangerous. It could happen again. And that just blew my mind.

Here the meaning seemed to be made largely by Steve, who used the simple, but evocative elements of the saber, cork and label to construct his own staggering insight about actually being near and able to touch something that was *still* that lethal. However, in spite of its seemingly offhand presentation, I'm sure that the exhibitor would have been pleased to hear how much he impressed Steve. For unconsciously or not, he tapped a deep fascination and horror we share about death and dying. The most meaningful exhibits resonate with our most meaningful and deeply held concerns.

When stories about one exhibit turn up more than a few times we may be finding evidence that the exhibit is tapping one of those deep veins. Although the accounts in themselves are not particularly interesting, we found several colleagues who wanted to tell us stories about childhood experiences with walk-through hearts.

"I kind of got hooked on museums very early in life by crawling through the heart at the Franklin Institute..." *Nancy Kolb* "...And it was just fascinating to see, because every time I went there I would go for that particular purpose—to see the heart..." *Joseph Molloy* "...The beating heart at the Franklin Institute when I was a kid..." *Debby Edward* "I remember at the Museum of Science and Industry being maybe six, seven years old. Going through the walk-through heart..." *Gene Dillenburg* "In Chicago when I was three years old, and I went inside the heart. Inside that heart, for me, was this incredible experience that I'll never forget. And I always remembered it throughout my life, at different periods of time." *Kathy McLean*

Certain exhibits, like the heart, seem to enter our collective subconscious. They gain their power from a shared, common instinct. In this sense, meaning is made by all of us collectively because the exhibit resonates to some basic human need or concern.

Let's wind up this exploration of meaning-making in exhibits with a few questions and speculations.

A profound question for all of us preoccupied with effective exhibitry is, can we really create exhibits that make meaning? We are pretty sure that we have begun to figure out how to convey information, but can we really orchestrate these big, meaningful experiences—and should we even try to? Let's start by examining once again who is really in control of these events.

There is such a personal, sudden quality to our stories of encounter and realization that it is not unreasonable, as I have suggested, to imagine that the story-teller may be making a larger contribution to the construction of meaning than the exhibit designer. What then do we exhibit makers really have to say about what the outcome will be?

You might dodge the question by arguing that the exhibitor's job is only to create a rich, provocative environment, inviting the visitor to make whatever meaning they will of it, rather than trying to drive them towards specific

Some of the most meaningful exhibits are also the most personal.

outcomes or conclusions. The iconic walk-through heart may have been in this rich-environment, but indeterminate-outcome category. The seemingly artless label, cork and saber in Galena were just enough provocation to get Steve's imagination working so that *he* could make something of these simple elements. And the very personal Caribbean island exhibit became the occasion for a shared "conversation" between Kathy McLean and the exhibit-maker where each created their own meanings from the experience.

But do these stories let us off the hook—or do we want to be let off the hook—in taking some responsibility for the outcomes of these pivotal stories? Probably not.

Certainly every conceivable piece of the map exhibit was exquisitely and successfully designed to convey a specific concept and give meaning to the subject of mapmaking. Although my contribution to the exhibit was required, very little was left to chance. Certainly the confrontation with the white and black doorways in *Field to Factory* was carefully orchestrated, but the outcome was not. Certainly MoMA's decision to let us take off our shoes and wander the Japanese house was a specific and conscious effort to allow a richly suggestive environment to create an understanding and appreciation of the special qualities of Japanese architecture. And certainly the Lawrence Hall of Science was trying to illustrate the function of magnetic fields in accelerating particles around the ring of the cyclotron, even if Fred Stein didn't catch onto the meaning for another twenty years.



So the art of exhibit-making did contribute to making these experiences meaningful even if the contribution of the visitor and the outcome of the experience was sometimes not completely defined or realized.

But this still doesn't answer the trickier question: should exhibits always aspire to making meaning? And if we wanted to, could we?

Remember that the direction to each respondent in our study was: tell us about *pivotal* museum experiences. These stories were not about run-of-the-mill museum encounters—these were ones that stood out, that seemed worth sharing. Let's not forget that we spend most of our time organizing perfectly acceptable, everyday, bread-and-butter museum experiences that leave a pleasant and even informative trace, but are hardly meaningful in the sense of our stage-setting question. After all, a supermarket diet is not really so bad, especially when it leaves room for a memorably contrasting four-star restaurant meal.

We may have to invent new ways to evaluate what we are doing.

But why do you suppose it is so hard when we really *try* to outreach ourselves and create elegantly crafted, meaningful experiences? Why, with all

our history and investment and passion, do we come up short so often? Why aren't there thousands and thousands of meaning-making examples like these stories littering our professional landscape?

It's probably not because the visitor holds some of the cards, and has a lot to say about how their experience turns out. It may have a lot to do with a compulsion to make our exhibits encyclopedic and safe rather than simple and stirring. We feel a compulsion to tell it all. Load it up. Our colleagues are watching and insisting, so we elaborate, make sure we cover the bases. To keep peace we compromise and lose focus. The spare, elegant exhibit as haiku seems out of reach. On the other hand, the intuitive, gutsy exhibit may seem too simple, challenging or even dangerous.

A final thought. If we believe experiences like these are important, how can we tell when they are happening and why? It's fairly easy to test for facts and simple concepts.

But how would you pick up on Fred Stein's gut understanding about how a cyclotron worked, when all he was doing with the modeled analogue was playing a game of skill? He only understood that it was a model for a cyclotron years later. And how would you know that the collecting exhibit had planted such a profound idea in the seemingly-indifferent kid's mind? We may have to invent new ways to evaluate what we are doing and to hold funders at bay if it takes anecdotal accounts and many years for some of these experiences to reveal their full meaning.

So it strikes me that these stories—their's, mine, yours, and others like them—have something to tell us about meaning making with exhibits. But are we listening? Do we care? If we aren't and if we don't we may be rejecting some of the richest, most revealing insights about our work. It would be a shame, for they are there, just for the asking.

I'd like to close with one more story about a vivid icon of my early 40s childhood in New York. In this case meaning flowed from the sudden realization that the world—my world—was not necessarily the same as everyone else's world, as of course I had assumed it was up to that pivotal moment.

There was a small diorama in an otherwise uninspired hall of animal behavior at the American Museum of Natural History. The diorama illustrated an old-fashion checkerboard-floored kitchen with a small dog sitting in the foreground, his back to the viewer. At the push of a button the scene dissolved into the transformed perspective of the dog. The converging lines of the patterned linoleum, table, stove, sink, window, all dropped to the dog's eye level. The room was now rendered entirely in blacks, grays and whites. I understood instantly: dogs are colorblind. I didn't know that! Do you suppose other animals can't see colors? How many other things don't see the world the way it looks to me? It was a lot to think about.

Most of the stories quoted in this article were collected as part of a research program supported by the Joyce Foundation, the James L. and John S. Knight Foundation, Children's Museums: Bridges to the Future, the Arts Management Program, Mandel Center for Non Profit Organizations, Case Western Reserve University, and the Chapin Hall Center for Children.