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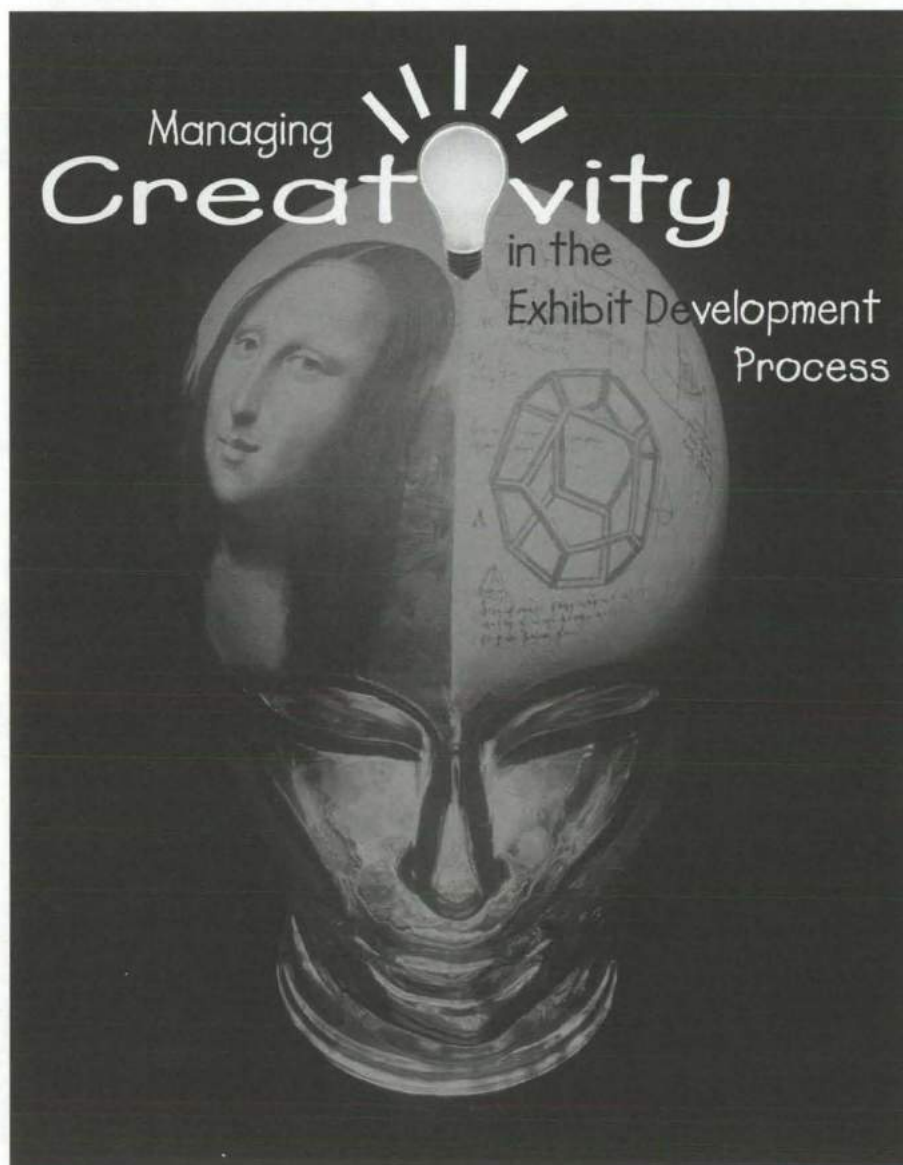
EXHIBITIONIST

NAME
NATIONAL ASSOCIATION FOR MUSEUM EXHIBITION

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from the president



by Whitney Watson

This issue inaugurates the tenure of Jay Rounds as the Editor of the *Exhibitionist* magazine. Jay brings to the task vast experience in the museum profession as well as an academic perspective from his current position as Director of Museum Studies, University of Missouri-St. Louis. This first issue provides a clear indication of how the publication will be evolving as the sole magazine devoted to the entire spectrum of work in the museum exhibition field. And though Jay and the other *Exhibitionist* staff will be setting the theme, tone, and content of the magazine, it still remains responsive to the needs and interests of the membership. I invite you to comment on format, content, design. Especially, I want your participation in the form of ideas and articles for future issues.

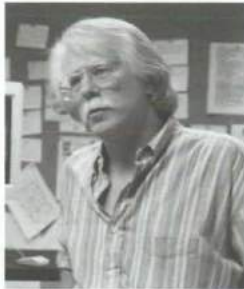
The NAME Board met in November, 1998 to discuss the work accomplished since Spring 1998 and to develop plans for the next year. Much of the discussion surrounded AAM's requirement of AAM membership to participate in the Standing Professional Committees such as NAME. The Board affirmed its commitment to be a full participant with AAM in this change and to aggressively make use of the services of AAM in order to focus the efforts of the NAME Board on providing better services to our members. This led to some intense discussions about the past and most importantly the future direction of NAME. Everyone came away really charged about setting a new direction for NAME in service, product and communication. At the NAME Business Meeting during the AAM Annual Meeting, a new strategic plan for NAME will be unveiled. It will affect structure, programs; almost everything that NAME does now or wishes it could do.

One direct result of this new strategic plan is the establishment of a newsletter for NAME members. This will be different from the *Exhibitionist* and will be published at six-month intervals to alternate between the *Exhibitionist*. The focus will be on people, news, and events. It will include some "nuts-and-bolts" information along with professional development opportunities. We have most everything we need for the first issue due out in June except (1) an editor to assemble the material into a package and (2) a name for the publication. Suggestions welcome.

In the center of this issue is a guide to the NAME sponsored and co-sponsored sessions at the AAM Annual Meeting. Greta Brunschwyler did a great job in getting the sessions to the National Program Committee. I think there will be sessions to challenge and interest most. Be sure to bring the guide with you to AAM to help decide what sessions will be most valuable. And of course, plan to attend the NAME Party at Dick's Last Resort. It definitely has an attitude.

It's the middle of winter and a bit difficult to think about Spring and the AAM Annual Meeting in Cleveland. As I was recently reminded, it is only a few weeks away at this point and I need to start preparing for the meeting. It will be busy with sessions, events, and I hope lots of conversations about the future. For both NAME and exhibitions. I look forward to seeing you there.

Whitney Watson
NAME President



by Jay Rounds

At a conference just a few years ago, Harold Skramstad made the comment that “the museum field still lacks...truly serious literature.” While I would also stress the field’s need for more truly funny literature, I do agree that it’s time to pay some close attention to how well the museum and exhibits literature is serving our needs.

In recent years, of course, there’s been an explosive increase in publications about museums and their exhibits, and much of that writing can accurately be called “serious”—perhaps even “grim.” But there’s a wide gulf between the rapidly expanding theoretical literature and the work dealing with concrete prescriptions for practice. Theoretical studies have done much to open our eyes to the complex webs of social entanglements within which we work, and have expanded our sense of ethical obligations to the communities that support our museums. Most of us now agree that changes in museum practice are essential and inevitable.

But what, precisely, should these changes be? The exuberant denunciations of past museum practices found in post-mod critiques seem to give little useful direction to those who must go to the office in the morning and design a new exhibit. To paraphrase Ecclesiastes, “There is a time for deconstruction and a time for reconstruction.”

Under the leadership of my predecessor, Diana Cohen Altman, *Exhibitionist* has developed into an outstanding journal of exhibit practice. I’m proud to follow in her footsteps, continuing the development of the journal as a vital resource in the reconstruction of our field. The cover describes *Exhibitionist* as a “journal of reflective practice.” By that I mean to emphasize that the publication will continue to be focused on the concrete practicalities of exhibit-making, but will also emphasize reflection on how practice might be influenced by emerging theories. In this issue, for instance, we explore how current research and theoretical work on creativity can help us strive for greater creativity in our own exhibit development processes. The next issue will address the practical implications of theorizing about museums as “meaning-making environments.” (See page 50 for an invitation to participate in that issue.)

I’m blessed with an outstanding team for *Exhibitionist*: Susan Beattie, Phyllis Rabineau, Willard Whitson and Jennie Zehmer. But we need all of *you* to be members of the team, as well. To improve exhibit practice, practitioners need to reflect on their work, and write about their thoughts to share with the rest of us. We hope that you’ll share those thoughts in the pages of *Exhibitionist*!

Jay Rounds
Editor, *Exhibitionist*



by Phyllis Rabineau

Hello again, readers. It's been a year since this column appeared—enough time for some juicy contributions to accumulate in the old e-mail box. Once again, our correspondents have sent exhibit recommendations from their journeys near and far. Let's start off with a "Postcard from Ireland," sent by Dianne Hanau-Strain. She writes:

"Such surprises here—I expected to be impressed by the Book of Kells and the National Museum. But what's happening in smaller new museums is amazing. All of us struggling to develop history exhibits in the U.S. should talk the boss into an educational trip to Ireland. Here, the past is a life or death issue. Add that to a growing tourist industry, overall prosperity, and the infusion of large amounts of European Union money and you find public history done incredibly well. On every scale—from innovative architecture to exquisite bilingual ID labels—the scene is impressive.

"The required stops in Dublin: First, the **National Museum** for its fine but conventional presentation of the gold and jewels of its national treasures. Then **Trinity College**, where the Book of Kells is exhibited with so much contextual material that seeing the manuscript itself is almost an anti-climax. Rooms of choice objects and well-written, backlit graphics overwhelm you with information on medieval culture, religion, monasteries, manuscripts, calligraphic techniques—even how to make ink and raise animals for vellum. There's a section on the marks and symbols ancient artists developed for fudging errors and correcting mistakes—I took notes!

"Our family (teenager especially) voted the **Kilmainham Gaol** the most interesting site in all Ireland. Just west of central Dublin, this grim, intimidating 19th century structure is best known as the place



Central Cell Block, Kilmainham Gaol, Dublin, Republic of Ireland

where the leaders of the 1916 Easter Rising were held and executed. A dynamite AV presentation, committed tour guides, and an exquisite three-level museum tell political history with rare style and passion. It's a case study of how interpretive media can really combine to bring ghosts alive in a historic setting. (A parallel story deals with flawed Victorian concepts of penal reform. Remember the Eastern States Penitentiary installation at the Philadelphia AAM? Here, a beautifully designed monochromatic exhibit explores ideas of isolation, constant surveillance, penitence, and, on a less theoretical level, interactives on the origins of the ID photo and the complexities of hanging.) The place haunted us all long afterward.

"Museums are just as dynamic in the boonies. The visitor center for the monastic ruins at **Clonmacnoise** is a great place to get an overview of the invasions and migrations of early Irish history. The space is a seamless part of the interpretation—a series of round, stone rooms like the thatched huts of early times. Architecture and graphic design are so well done that you never realize



that, except for stone crosses, the site's artifacts are housed back in the National Museum.

"At **Strokestown Park** you can tour the great house and gardens—or visit the **Famine Museum** housed in its stables. By most conventional standards it's a deeply flawed exhibit—an endless series of rooms, unevenly developed themes, mostly graphics. But it's also daring, passionate and ultimately compelling. It documents the story of the tenants on this estate during the great famine, explores the larger implications of their history, and applies these lessons to colonialism, famine and development politics in the world today. There are sudden leaps from County Roscommon 1850, to Somalia 1998, that leave you totally unprepared for the charming cafeteria in the last room.

"If you've ever struggled to make an exhibit without "stuff" you should study the **Blasket Island Centre** at the tip of the Dingle Peninsula. It's as close to perfect as a cultural museum gets. It tells the story of an isolated island people, permanently evacuated in 1953. The fishing community, we're told, used the little they had until it wore out. Only the land and the language are left to tell the story. The harsh seacoast environment is an active presence everywhere. Heavy winds batter you at the entrance to the beautiful but spare building of glass and stone. Inside, the structure is designed to frame views of the islands and the sea at every turn. Exhibits highlight local writers and storytellers, their words reinforced by the perspectives of anthropologists, linguists and literary figures who spent time with them. You'll find a few pieces of contemporary art and photographs, but the centre is clearly dominated by text panels. Their design is inspired—almost lyrical. Imagine, if you can, graphics that look like the Irish language sounds—bilingual even! One small, skylit stone chamber holds nothing but a bench and sounds: of birds, of the sea, a little music—mostly spoken words in a language I didn't understand. I'm still trying to understand its magical hold on me, the one who always argues that audio alone can't keep a visitor's attention long!

"One last observation: If you do head to Ireland, bring a colleague from visitor services for lessons in creating a welcome and accessible environment. Every site has a reasonably priced tearoom. Universal design is common. Staff members everywhere seem to genuinely enjoy visitors. Take the ticket seller at **Bunratty Castle**, a Williamsburg-type historical park near Shannon airport. Our family asked whether it was compact enough that we could take a quick look around and still make our plane. The clerk answered that we'd miss so much, so, to be fair, she'd only charge us one admission!"

This summer, Dan Oliver found plenty of inspiration in an exhibit at Montreal's **Centre for Canadian Architecture**.

"The American Lawn" anchored its presentation with innovative multimedia installations.

Setting the stage for looking at lawns from unusual perspectives, the exhibit opened with a film projected onto the floor of the gallery, showing a wide-angle, bird's-eye view flying over lawns whose green expanse was punctuated by an occasional water sprinkler or child playing. From here, visitors entered a room housing stereoscopic viewers, mounted on poles and adjustable to accommodate any comfortable viewing height. Each viewer offered a 3-D image of the boundaries between neighboring lawns, most unmarked by fences yet the property boundaries still clearly perceptible because of the distinctive way each owner cared for their lawn—mowed or unmowed, tidy or not. Dan identified the message here that although lawns are continuous and unite a neighborhood, still people always locate their boundaries. The next room of this exhibit combined a continuously changing slide show of bungalows, mansions, ranch homes, all encircling a rear-projected film screening a scene from "Invasion of the Body Snatchers." In the background a man is seen mowing his lawn, while in the foreground his daughter and his doctor discuss his increasingly passive and conformist behavior. They do not yet know that he has been snatched! replaced by one of the pod people! turned into a plant! For these 1950s filmmakers, suburban lawn care was the perfect metaphor for the loss of individuality in totalitarian systems.

Other installations in the CCA's exhibit presented several typological series—of turf specimens; of lawn diseases; of athletic shoes designed for use on grass (golf, soccer, football, tennis); of lawn care apparatus (gloves, clippers, sprays, trimming gizmos); of yard kitsch (gnomes and flamingoes). Display cases for smaller items were beautifully designed and crafted from glass, mirrors and stainless steel. Near the end of the exhibit, three lawn mowers were offered on rotating platforms, a video monitor hanging overhead displaying a vintage instructional film for parents on raising teenagers, highlighting the importance of responsibilities such as mowing the lawn. Dan characterized this exhibit as "sophisticated whimsy, mind-numbingly comprehensive" yet stimulating and provocative.

Dan also offered a few broader observations about the Centre for Canadian Architecture. He found its very contemporary design to be "sophisticated but not severe," and noted that visitors planning a visit to the CCA should allow a bit of extra time to navigate its beautiful but not very visitor-friendly environment, featuring a barely-marked entrance door and no directional signage whatever.

Very close to home (his home, that is) Tom Dux sent the lowdown on off-the-beaten-track highlights in and around Kansas City. "We have a lot of small museums in a 200-mile radius. Some are the result of individual insanities, others



due to Bicentennial Fever, and others due to a societal need to record a history that was glorious but fleeting. Many towns in the Midwest were once considerably larger and of greater consequence than they are now; some museums have surprisingly unique collections. For example, **Fort Leavenworth** has one of the best collections of horse-drawn vehicles, since the army never throws anything out. In **Watkin's Mill**, there is a fabric mill untouched from the late 1800s; the old man who owned the place closed it for business reasons, locked the door and for about a hundred years it remained untouched. There are still products for sale in the company store.

"Our family is somewhat museum crazy. We've been to all different kinds. We take day trips to the small and medium towns and see the grandma's attic museums. Right after Christmas we went to Topeka and toured the **Kansas National Guard Museum** and the **Topeka Air Combat Museum**—bizarre but an old favorite, two quonset hut hangers in an abandoned air force base. Moldy rusting planes, unheated, pigeon droppings and a wind that howls around the big hanger doors. There is a man with short pants, white socks and electric hair who hangs out in the nastiest hanger and acts as unofficial tour guide. Although intimidating, he's kind of interesting and takes you back to where Joe Schmoie is rebuilding planes. Tells you how the MIG came to Kansas from Poland via a Californian with IRS trouble. There's also a museum of psychiatry at the old state mental hospital, Big Brutus the former strip mine digger (16 stories tall), a sunken steam ship, the jazz museum, the Negro Baseball Leagues Museum, a toy museum. At the Dalton Defenders museum you can see a wall-size photomural of the dead Dalton gang."



Gallery of World Religion Art, St. Mungo's Museum, Glasgow, Scotland

Digging into the mouldy filing cabinet of museum news clippings, I recently unearthed an item from the *Washington Post* about our nation's only "registered" Beatles museum. The article describes **McKee's Beatles Museum**, for many years located in Stanardsville, VA, in the front half of the eponymous Mr. McKee's print shop. Its single gallery housed recordings from nine different countries, as well as assorted trinkets, posters, photos, ticket stubs. The gems of Mr. McKee's collection, however, are guitars like (a small but important word) ones used by John and Paul. Evidently, local interest in McKee's museum was not too strong, because he and his wife subsequently made a deal with Gold Key Resorts, and moved their collection to Virginia Beach, FL. In their expanded headquarters, the owners of the museum now offer a karaoke room for that hands-on (or voice-on) experience.

To round out reports from far-flung correspondents, I'll add a few highlights of my recent museum-going experiences. This summer, I was lucky enough to visit with Mark O'Neill, a friend made five summers ago at MMI. Mark is Director of the Museums of Glasgow (yes, that's Scotland). In this capacity, he presides over a wonderful array of institutions, including the **People's Palace**, a museum that successfully melds social history, popular culture and real audience



Recreated WWII Backyard Bomb Shelter, People's Palace Museum, Glasgow, Scotland



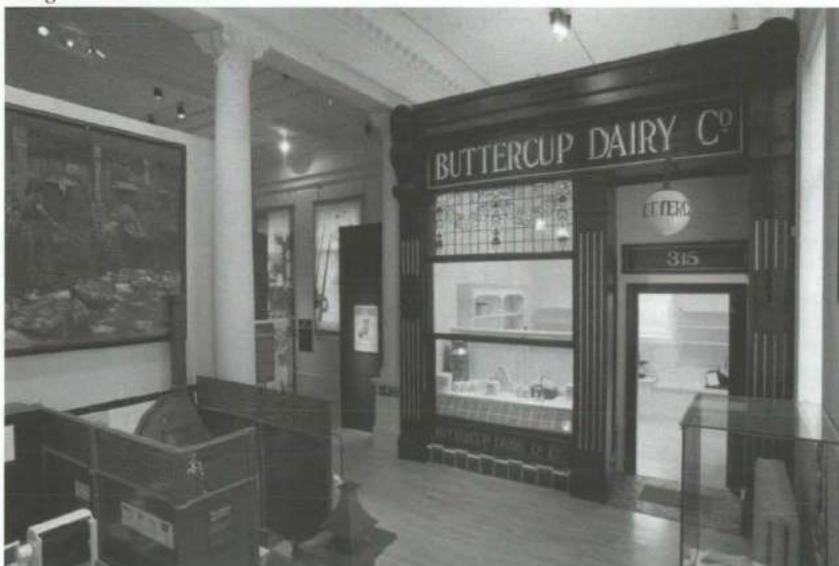
appeal. Highlights range from a delightful multimedia exploration of Glasgow's distinctive dialect (evidently even other Scots have difficulty understanding it); to a nostalgic recreation of a 1950s creamery; and a tribute to Glasgow's most beloved dancehall. I found the most power in an exhibit devoted to low-income housing, which pulled no punches in its honest portrayal of harsh physical conditions and the tensions among varied residents, and yet celebrated the strength of working class communities. Mark also oversees the extremely unconventional **Gallery of Modern Art**, where exhibits are organized under rubrics of Earth, Air, Fire and Water—although the relationship of the actual works displayed with these elements is often quite obscure. The Gallery has been something of a *cause celebre* in Glasgow, and visitors entering its portals pass evidence of this lively civic discourse, preserved in cascading scrawls of graffiti criticizing the museum and its offerings. Mark, ever the champion of audience as well as free speech, wouldn't dream of obliterating this unusual version of "visitor response survey."

My family also spent a lovely Sunday in the very unique **St. Mungo Museum of Religious Life and Art**. (St. Mungo, for all you non-Scots, was the first Christian missionary of Glasgow, back there in the good old 6th century.) I don't think I've ever been in a museum devoted exclusively to the multicultural

study of religion. Located next to Glasgow Cathedral, the museum greets arriving visitors with a wonderful statue of the Hindu god Ganesh. The main display chronicles the ways different religions—including Christianity, Buddhism, Islam, Judaism, Hinduism—guide people through the stages of life. To contextualize artifacts, the exhibit uses "first voice" interpretation by contemporary Glaswegians who follow each of the faiths. Other exhibits at St. Mungo's offer beautiful art objects from each of the major faiths, and document the development of missionary Protestantism. Visitors can take time out for contemplation amidst the Zen Buddhist stone garden in the museum courtyard.

An independent institution in Glasgow is the **Tenement House Museum** at 145 Buccleuch Street. In Scotland, tenement is the generic name for three- or four-story apartment blocks, mostly built around the turn of the century in large developments that cover much of the city. They still are a dominant housing stock of Glasgow. Tenements were built for upper, middle and lower classes; the museum is located in a single flat of a middle-class

building. Here lived, from 1911 to 1965, Ms. Agnes Toward, a spinster with remarkable collecting habits, who left behind such an extensive array of personal belongings and papers that they constitute a veritable social history of her times. The experience of visiting the museum is exactly like being received into her home. Visitors ring the doorbell and are admitted in small groups, greeted by a friendly docent who, without attempting to impersonate Ms. Toward, manages to communicate the feeling that she is indeed our hostess. After wandering through the meticulously preserved furnished rooms, visitors flow into the adjacent flat to view displays of Ms. Toward's personal possessions and papers—all representing the most mundane aspects of an ordinary person's life. I've been in many historic homes before; this experience is like no other, remarkably personal and humane.



Recreated 1940s Dairy Shop, People's Palace Museum, Glasgow, Scotland

"What lies beyond us and what lies before us are tiny matters when compared to what lies within us"

—Ralph Waldo Emerson



features

by Jay Rounds
Editor

ENHANCING CREATIVITY IN THE EXHIBIT DEVELOPMENT PROCESS

It has been frequently observed that every museum exhibit is a work of art, whatever its subject. It is the result of a process of creativity, a process that almost always involves a number of people from differing disciplines. Thus, at all times the work of exhibit development requires strategies for managing creativity within the team process.

Given the centrality of creativity in our work, remarkably little attention has been paid in the literature of museum studies to the nature of the creative process in exhibit teams—either to an underlying theory of that process, or to a set of practical prescriptions for management. Leadership of exhibit teams has been written about, but little of this work has focused specifically on how creative thinking emerges within such a complex process. Indeed, some of the prescriptions in this literature seem better suited as methods for *suppressing* creativity in the name of achieving harmony within team dynamics.

But museums are in a time of change, and changing expectations for museums and their exhibits require a more reflective focus on our own creative processes. We need creative thinking to design new approaches that can resolve the conflicting demands made on museums by our many constituencies. To do this, we need both better theoretical models of the creative process in exhibit teams, and workable applications of those theories in prescriptions for practice.

The contributions in this special theme section attempt to lay the foundations for meeting these needs. Over the past few decades an enormous amount of research has revolutionized scientific understanding of creativity, and has explored the work of creative teams in organizational settings other than museums. In the first two articles, leading experts summarize the current state of knowledge in creativity research, pointing to findings that might translate to the museum setting as well. These reviews are followed by a series of contributions that analyze the implications of creativity research for exhibit development, and that propose specific attitudes, actions and techniques that you can use to help your exhibit team more fully realize its potential for creativity.

When life itself seems lunatic, who knows where madness lies? Perhaps to be too practical is madness, to surrender dreams — this may be madness. To seek treasure where there is only trash. Too much sanity may be madness. And the maddest of all, to see life as it is, and not as it should be.

—Cervantes



What Do We Know About Creativity? And Why Should We Care?

by Mark A. Runco

Mark Runco is Professor of Psychology at California State University-Fullerton. Dr. Runco is editor of Creativity Research Journal, and has authored more than one hundred articles and books about creativity. He can be contacted at: runco@fullerton.edu.

What do we know about creativity? Now that the scientific method has been applied to the topic for nearly fifty years, quite a bit is known, and much of it is quite reliable. The question “what do we know” does, however, beg a related question, namely, “why should we care?” Why is creativity important? How does society benefit from creativity? These questions are addressed in the present article. After I briefly discuss the importance of creativity I review what is known about creativity by addressing a series of questions:

- Is creativity a social or an individual phenomenon?
- What distinguishes creative individuals?
- Can we learn to work more creatively?
- What kinds of settings are conducive to creativity?

How Does Society Benefit From Creativity?

Creativity is the engine of cultural evolution—of our ability to continue adapting to our changing environment (Albert, in press; Richards 1996). In the long run, our survival as a society and as a species is dependent on “a cultural process that continues to generate new mental products, including creation of some wild or ‘way out’ thoughts and notions, along with more conservative ones (Richards 1996).” These creative ideas provide the raw material for a distinctively human form of evolution:

Comparable to the evolution of genes, one may speak of an ongoing evolution of memes, or units of “cultural imitation”....of an evolution of information. This informational and cultural process is distinct from biological evolution but can interact readily with it (e.g., the people who didn’t freeze because they discovered fire). As with genetic recombination in mating, memetic recombination occurs widely—but can happen in greatly more complex ways, since it can, literally, draw all at once on information spanning millions of miles and millions of years. Indeed, the most abundant and fertile forms of new information will, in general, tend to be the most creative ones (Richards 1996).

While we generally think of creativity in relation to technological or artistic innovations, it can also be exercised in the realm of proactive ethical and moral behaviors (Gruber 1993; Heinzen 1994). Such proactive behavior may help us avoid significant problems facing society and threatening the earth. Gruber argued that creativity in the moral domain will help us move from what can be done (for survival and peaceful existence) to what ought to be done. Creativity is central to our prospects not just for survival, but for finding new ways for all people to live good lives together in a just society.

Is Creativity a Social or an Individual Phenomenon?

Common assumptions about creativity view it as something done by creative individuals within the boundaries of their own minds. Similarly, it is often defined as a quality inherent in certain products (such as works of art) produced by those people. Museums probably reinforce these popular assumptions with traditional displays highlighting objects as exemplars of eminent creativity.

“Creativity can also be exercised in the realm of proactive ethical and moral behaviors.”



Research on creativity has found these assumptions untenable. For one thing, they provide no way of distinguishing between ideas that are "creative" and those that are "crazy." To be considered creative, it does not suffice for an idea or other product to be original or innovative; it must be both original and *useful*. It must solve a problem, open up a new set of possibilities, or otherwise serve some useful function. Originality without usefulness is at best meaningless, at worst crazy.

But how do we know that something is "useful"? Recent social and systems theories posit that creativity is a social attribution, a label placed on certain ideas or products rather than a quality inherent in the ideas or products. These attributions are made through distinctive social processes. Csikszentmihalyi's (in press; 1996, chapter 2) systems theory argues that creativity must be understood as residing in a set of relationships with psychological ("the individual"), social ("the field") and cultural ("the domain") elements. At a moment in time, a cultural domain (e.g., the discipline of molecular biology) comprises a certain body of knowledge and techniques. A creative individual studying that domain produces an original idea that might be relevant to the domain. That original idea is scrutinized by the field—the group of individuals recognized as experts in the domain (e.g., practicing molecular biologists). If they decide that the idea has value (i.e., is "useful"), then the idea is incorporated into the domain, changing the domain in some more-or-less significant way. Csikszentmihalyi argues that an idea can be called "creative" *only* when this full cycle is completed, from domain to individual to field to revised domain. If the gatekeepers of the field reject the idea instead, then it is labeled "irrelevant," "mistaken," or even "crazy."

One line of evidence for this theory is the way certain ideas change attribution over time. Gregor Mendel's highly original ideas about genetics languished for some fifty years before being labeled "creative." Rembrandt was considered uncreative by his contemporaries, who preferred the work of other painters now generally unknown. "Rembrandt's

'creativity' was constructed after his death by historians who placed his work in the full context of the development of European painting, and who pointed out novelties and differences between his work and that of his predecessors" (Csikszentmihalyi, in press). Conversely, ideas once considered highly creative can later lose that attribution (e.g., Ptolemaic astronomy). These patterns are taken to demonstrate that creativity is a social attribution rather than some stable quality inherent in the idea itself.

These theories seem closely related to the debates in the museological literature over whether museums collect objects because those objects are recognized as creative, or whether the objects are considered creative *because* museums have collected them (e.g., Pearce 1992). Systems theories of creativity would appear to support the latter position.

"Originality without usefulness is at best meaningless, at worst crazy."

Systems theory also seems relevant to the question of group or team creativity. Traditional assumptions that view

creativity as a solely individual function make "group creativity" appear oxymoronic. But an exhibit development team can usefully be conceived as a small creativity system, in which the "domain" is the exhibit concept at its current state of development, and the "field" consists of the members of the team (or at least those involved in decisionmaking). Original ideas are generated in the heads of individual members of the team, but they have no significance (and so are "not creative") unless they are accepted by the team and incorporated into the design.

This implies, of course, that individuals who are effective in selling their ideas to others are more likely to become recognized as creative, regardless of the inherent qualities of their ideas. In a study of eminent creators in a variety of fields, Howard Gardner (1996) concluded that all were exceptionally persuasive, and devoted a great deal of effort to promoting their images as highly creative (cf. Runco 1995; Simonton, in press).

What Distinguishes Creative Individuals?

Even if we accept the view that creativity is a social phenomenon, the attributions need to be directed to something or someone. The individual is one-third of the system, along with domain and field. What, then, determines who these individuals are? Are creators a distinctive type of human being, different from the rest of us in some identifiable way?

Much has been written about the so-called "core characteristics of creative persons." These include open-mindedness, curiosity, independence, intrinsic motivation,



and selective persistence. Each of these characteristics has been identified in biographical, autobiographical, and personality research (e.g., Barron & Harrington 1981; Eysenck 1997). None of them is sufficient to guarantee original ideas, however, because like all personality traits they are dependent on the environment, or what is called the immediate "state." All behavior, including ideational behavior, is a function of an interaction between a trait and a state.

Furthermore, Csikszentmihalyi (1996, chapter 3) argues that what distinguishes creative people is precisely their lack of conformity with standard definitions of personality characteristics, such as that declaring that every individual must be either an extrovert or an introvert. Their complex personalities, he observes, "contain contradictory extremes....Like the color white that includes all the hues in the spectrum, they tend to bring together the entire range of human possibilities within themselves" (1996:57).

Much has been made of the supposed link between creativity and insanity, and research is abundant that appears to support this linkage. However, the case is by no means proven, and creative activity may offer health benefits to individuals as well. There are numerous famous creators with some form of mental illness, but the correlation between creativity and psychopathology may be inflated as a result of sampling biases in the research. Certainly many eminent creators have committed suicide (Runco 1998) or suffer from affective disorders (Runco & Richards 1998); but many persons commit suicide without producing high-level creative work, and many persons doing creative work are free of psychopathology. In fact, many creative individuals are "self-actualized," which is thought to be the epitome of psychological health (Maslow 1971; Rogers 1980; Runco, Ebersole, & Mraz 1997).

As with creative products, it's hard to define creative individuals on the basis of stable, inherent qualities. A more productive approach is to focus on the *process* of creativity. Creative people have refined cognitive skills that they use in the process of problem solving (Csikszentmihalyi, in press; Runco 1994). They know where to devote their attention and their efforts, where to find "good problems." To get a creative idea, you need a creative problem to solve (Runco 1994; Runco & Dow, in press).

"...creative ideas are often generated through "remote associations"—connections between things that would not normally be considered as related."

Remembering is one type of cognitive process related to creative thinking, but memory as a repository for experience can either facilitate or inhibit creative thinking. Correlations between experience and creative performance are often strong, since experience may provide information that is useful when faced with a problem. Additionally,

experience may suggest strategies that are useful for creative problem solving, and such strategies are encoded in memory as procedural information or know-how.

There may, however, be an optimal amount of experience, or at least an optimal amount of reliance on the experiences encoded into memory. After all, if we do

things the same way every time, how could we be original? If we solve problems only by remembering how they have been solved before, or by remembering how others suggested they be solved, how can we generate original insights?

Some of the evidence for the potential inhibitory effect of memory comes from research with experts. Experts often produce quite creative work, but sometimes their expertise—which requires a great deal of experience—leads to rigid thinking. Expertise may allow the individual to process information quickly, but that is often because that individual is making assumptions and processing large chunks of information rather than details. These assumptions and routines may make behavior stereotyped and rigid rather than spontaneous and original. They become "conceptual blocks" that prevent the expert from seeing other possibilities.

Metacognition

Metacognition is also very important for the creative thinking process. Metacognition is cognition about cognition, thinking about how we're thinking. If we are aware of our tendency to rely on fixed assumptions, we can recognize them as conceptual blocks and so avoid them. With a high degree of metacognitive self-awareness, we can develop expertise and yet retain the spontaneity that is so beneficial to creative thinking.

Metacognition also facilitates the intentional use of strategies and tactics for creative thinking. Highly-creative people usually understand a great deal about how their creativity works, and have a repertoire of techniques that help them focus and get into the flow of their creative process. Other articles in this issue of *Exhibitionist* describe a wide variety of such techniques that may be particularly applicable to the exhibit development process.



"What is philosophy today if it does not consist *not* in legitimating what one already knows but in undertaking to know how and to what extent it might be possible to think differently?"

—Michel Foucault

Mednick (1962) suggested that creative ideas are often generated through "remote associations"—connections between things that would not normally be considered as related. They are "remote" in the sense that they are not the first things we think of, but instead are reached only at the end of a long chain of ideas. He proposed that highly creative individuals move quickly to remote associations. Unlike the rest of us, they need not exhaust the obvious ideas first. Support for Mednick's view has been supplied by research with college students and children (Milgram and Rabkin 1980; Runco 1986).

Creative persons tend to be flexible, and as a result, adaptable. This is especially important because cultural changes are occurring so quickly now. It would also seem to suggest that really creative people ought to be able to adapt to work effectively within creative groups such as exhibit development teams.

Can We Learn to Work More Creatively?

It's often assumed that creativity is an innate talent determined by our genes. We've either got it or we don't, and can't do much to change that. This is misleading. What is important about creative people is not something about what they *are*, but something about what they *do*. A person who has great innate talent, but never exercises it, is not making a significant contribution to society and is unlikely to be recognized as creative. They won't even really develop their inborn talents, won't fulfill their true potential.

When we focus on creativity as a form of behavior it becomes apparent that we *can* learn to behave more creatively. Our creative performance depends partly on our innate abilities, but also on our attitudes toward our own creativity, and on our cognitive skills. While we may not be able to change innate abilities very much, we certainly can improve our attitudes, and we certainly can become more skillful in our cognitive processes.

One common target in efforts to enhance creative performance assumes a distinction between convergent and

divergent thinking. Convergent thinking is used when there is one correct or conventional answer and the task is to find it. Divergent thinking, by contrast, generates many different options, some of which may be original. Divergent thinking is thus an important element in creative thinking.

Much traditional education focuses on convergent thinking, on leading students to the one right answer. It is fairly easy, though, to turn many standard educational exercises into open-ended tasks that allow for divergent thinking. Sometimes it is simply a matter of providing the conventional solution or datum and then asking for other possibilities. Sometimes a situation can be changed so it is slightly hypothetical and therefore open to new possibilities. Even historical topics can sometimes be opened up for divergent thinking by asking, "what if...?"

Creative thought often involves convergent thinking as well—remember that creative ideas must be both original *and* useful—yet convergent thinking and traditional intelligence receive the lion's share of attention in educational settings. Rubenson and Runco (1995) used psychoeconomic theory to describe why this is the case. One reason is that traditional skills are fairly predictable.

Creative talents do not translate into predictable outcomes, so there is risk involved. Employers take risks when they hire a creative person, educators take risks when they rely on their own creativity for the curriculum, and reactions to creative museum exhibits may be relatively unpredictable. Since most people have an aversion to taking risks, creative approaches may be de-emphasized or even actively repressed.

Rubenson and Runco's (1995) model suggests that efforts to enhance creativity should not focus on increasing knowledge bases and developing expertise. In psychoeconomic terms, expertise results from a large investment. The expert has devoted a great deal of time and energy to a particular theory or line of work. But whenever

"One common target in efforts to enhance creative performance rests in the distinction between convergent and divergent thinking."



there is a large investment, changes are resisted. In economic terms, change involves a risk of lost investment and depreciation of assets. Rubenson and Runco suggest that experts may become inflexible in their thinking because they have invested so much into their fields, and they have so much to lose. Experts do of course have a great deal of experience and information to offer, but at the same time they tend to make assumptions based on their wealth of experience and they may not be entirely open-minded. The rigidity of experts has been demonstrated several times in the creativity literature. In fact, most adults become more rigid—and less flexible—as they grow older (Chown 1960). This gives us all the more reason to increase our efforts to enhance creativity.

Another potential avenue for enhancing creative performance focuses on increasing the “fluency” with which the individual or team produces new ideas. Highly creative people tend to be highly productive: they produce a large quantity of work in the process of producing their highly-creative products. It is possible that quality and quantity are separate results of high energy and intrinsic motivation, but more likely they are functionally related. High quality ideas and solutions may be found most easily when a large number of options are available. As Linus Pauling pointed out, “The best way to get a good idea is to get a lot of ideas.” Thus, enhancement techniques can target fluency and productivity in generating a large number of ideas, with legitimate hope that quality will follow.

A misleading target for enhancement efforts is that of “right brain processes.” There is good research on the two hemispheres of the brain (Hoppe and Kyle 1990; Katz 1997) but much confusion in interpretations of that research. Although the two hemispheres of the brain may in fact be responsible for distinct processes, in healthy individuals the two sides of the brain work together. Just as divergent thinking is not by itself sufficient to explain creative problem solving, so too are right brain processes alone insufficient to explain true creativity. Creative solutions are not just original; they are also useful. Achieving both qualities—and selling the viability of the solution to the gatekeepers of the field—seems to require the interaction of the two hemispheres.

Creativity Can Also Be Repressed

For all the social value of creativity, more effort seems to be expended on repressing it than on enhancing it. As noted earlier, creativity may be repressed due to risk aversion and fear of the unpredictable. It is also sometimes repressed

because some creative people exhibit behavior that may be difficult to deal with. In the classroom, for example, teachers typically declare their respect for creativity; but when asked about nonconformity, autonomy, daydreaming, and other behaviors that correlate closely with creativity, they respond with something like, “Those children are so difficult in a classroom.”

The originality and spontaneity of creative individuals adds richness to life and provides variety in the form of individual differences. To the degree that creative persons are varied and original, they may be atypical or even deviant (in a statistical sense). Creative individuals can be perceived as difficult because we have biases against deviance. And creativity can require tolerance. As Richards (1996) put it:

How tragic if we mindlessly equate the ‘abnormal’ with the ‘pathological,’ and demean the very diversity that can be enhancing and lifegiving. To function fully as human beings we need to broaden and redefine our acceptable ‘limits of normality.’

Bruner (1965) claimed that the number one objective of education was “to prepare our children for the unforeseeable future.” Because of their ego strength, and especially their flexibility, creative individuals are well prepared to cope with the surprises waiting in the unforeseeable future. They may, however, be difficult to have in the classroom or in the workplace, where people need to follow rules, respond to authority, and learn or work with materials that may not be intrinsically interesting. This leads to our final topic: how to design settings that may stimulate creativity, rather than repress it.

What Kind of Settings Are Conducive to Creativity?

Research in developmental psychology shows that parents who respect the autonomy of their children and provide diverse experiences may contribute to the fulfillment of their children’s creative potentials. Harrington, Block, and Block (1987) drew from Carl Rogers’ theory of creativity and pointed to psychological safety, psychological freedom, openness to experience, an internal locus of evaluation, and toying with elements and concepts as supportive factors in the home.

In general, creativity requires opportunities for creative work, reinforcement for that work, appreciation of originality, and models of creative behavior. In organizational settings, employees need autonomy and respect. Amabile and Grysiewicz (1989) suggest that creative organizational environments are typified by freedom (freedom in deciding what to do and how to do



it), challenge (a sense of having to work hard on challenging tasks), resources (access to appropriate resources, including people, materials, facilities, and information), supervision (appropriate goals, values individual contributions, enthusiastic modeling), coworkers (a diversely skilled group, with trust and commitment), recognition (fair, constructive feedback), unity and cooperation (cooperation, flow of ideas), and specific creativity supports.

Creativity is an important form of human capital (Rubenson and Runco 1995), one that can be nurtured and increased for the benefit of both individuals and the society as a whole. As with any form of capital, we will reap the greatest benefits from creativity if we understand it thoroughly, and invest it wisely.

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Managing Creative Teams

by Steven Pritzker

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We've all recognized and enjoyed the products of great teamwork. A jazz band like Duke Ellington's in which brilliant players contributed to a unique sound; a football team like the Denver Broncos where a beautifully coordinated offense left opponents frustrated; a NASA rocket taking off to a shuttle or a Mars expedition; a beautifully written, directed and acted movie like *Shakespeare in Love*; a great exhibit like "Fake—Not a Fake," which expanded visitors' understanding and experience of art. The question naturally arises, is the creativity of a team just the sum of its parts or is something more complex going on?

In this article, we'll examine the differences and similarities between individual and team creativity and review some of the research about managing creative teams. Areas explored will include cultural climate, selection of team members, goals and deadlines, communication and conflict, the selection and development of ideas and the decision-making process.

Differences and Similarities Between Individual and Team Creativity

First, let's look at some of the differences between individual and group creativity. Team members need social skills and the ability to merge their work with that of others. Many of our most eminent creators had distinctive and sometimes difficult personalities which wouldn't fit into any group. In many ways, independent thinking and unwillingness to compromise were core ingredients in the creativity of artists like Van Gogh and Proust and scientists like Einstein and Galileo.

Team creativity is usually highly dependent on leadership; however, the skills required to lead a group are different than those used in individual creativity. Problems must be solved, but at the same time the leader of a creative group must be concerned with motivating and maximizing the contributions of each member of the team. Occasionally a creative individual like Thomas Edison comes along who also has the skill to found and manage a company like General Electric, but more frequently entrepreneurs who create companies often have to leave when the job of managing them becomes overwhelming.

Team work brings different satisfactions than individual creativity. The leader may receive direct ego reinforcement, but individual members of the team often must find their gratification within the group. Rewards may include a sense of community, participating in an enterprise that is greater than the individual could accomplish alone, and in the case of success, enjoying the prestige of being part of a winning team. The pride of playing under the leadership of a Toscanini, being a part of a legendary team like the Chicago Bulls of the 90's, or participating in the growth of a company like Oracle can be an extremely satisfying experience.

"...the leader of a creative group must be concerned with motivating and maximizing the contributions of each member of the team." "One or even several creative individuals can't do it alone."

Teams in many domains require a combination of the right members in different roles in order to succeed. One or even several creative individuals can't do it alone. Michael Jordan was a brilliant player who won scoring championships for years, but never came close to winning a championship until he recognized becoming a team player was more important than chalking up more individual accomplishments. Once he made this decision, he became a more complete player and achieved goals he couldn't have reached alone.



There are similarities between individual and group creativity: the challenge of finding a new way to accomplish goals; willingness to take risks and the ambivalence that risk necessarily entails; accepting creativity as a process which requires persistence; and an ability to "market" ideas to others are qualities which hold true for both individuals and groups.

Research about Team Creativity

One of the most important and challenging jobs in preparing exhibits is getting the right creative team together and managing it effectively. While there doesn't appear to have been any research conducted specifically on the creative process in museum exhibit development teams, there is a large body of research about creative teams in other settings and many lessons learned from that research may be transferable to exhibit development.

The Importance of Cultural Climate

The cultural climate of an organization is crucial in determining the level of creativity which will be achieved. Many studies have been conducted in which workers at all levels are questioned about how they perceive their organization's attitudes, behaviors and atmosphere. Ekvall (1999) pointed out that the climate is crucial "because it influences organizational processes such as problem-solving, decision-making, communications, coordination, controlling and psychological processes of learning, creating, motivation and commitment."

Research has identified some key elements which distinguish innovative organizations. One hallmark is an open atmosphere where ideas are expressed freely.

Differences in opinion can be stated and resolved without becoming personal. Risk-taking is encouraged and failure is seen as a natural

part of the creative process. In order to be creative, individuals need to feel their work has importance and offers them a challenge. They need to trust their coworkers and work in a playful, humorous environment.

Creativity will not flourish in an atmosphere that is controlling, bureaucratic or inflexible. Each organization has a history and a face it presents to the community. Some museums portray themselves as custodians of the past. Tradition may lead to a tight structure where things are done as they have always been done. Creative individuals will feel restricted, grow frustrated and leave these types of organizations.

Other organizations pride themselves on being innovative and exciting. These organizations will attract and keep more

creative people who thrive in an environment where they feel they can do their best work. Sometimes a lack of

"...failure is seen as a natural part of the creative process."

resources will force smaller, less well-known organizations to

be more creative. For example, Harvey Lichtenstein, President of The Brooklyn Academy of Music, stated while being interviewed by Charlie Rose that he probably would have enjoyed running Lincoln Center, but ending up in Brooklyn challenged him to develop more creative programming.

If an organization hasn't supported creativity in the past, the message must come through loud and clear that the same old solutions aren't enough, that something new and different is in the air. Expect some healthy skepticism from employees because many organizations pay lip service to creativity without having a clue what it really is. It takes real commitment and courage from top management to change the cultural climate of an uncreative organization.

Putting The Team Together

Selecting the team leader is crucial because the work done by the group will probably reflect his or her personality and predilections. If you are looking for exciting creative ideas, the leader needs to be somebody who has the confidence and ability to take risks. A conservative leader will produce conservative exhibits. The importance of the team leader has been estimated in the range of 30-70% in the success of a creative project.

Team leadership calls for knowledge of the subject, but that is just the beginning. Mumford and Connelly (1999) identified other crucial skills of leading creative teams,

including motivating group members and helping build their self-worth, communicating a vision and making adjustments as the situation

changes. In addition, an effective leader must understand how the organization works so he or she can overcome the limitations and problems which inevitably occur. Flexibility and social skills are key ingredients in making a creative team effective.

Selecting the right members for a team is an art. Amabile (1998), after conducting research with a number of organizations, concluded the most important single thing managers can do to enhance creativity is "match people with the right assignments." Develop sufficient knowledge about potential team members so that individuals who have an intrinsic interest in the area are selected. Teams that have worked well on one type of project may not be suited for something different.



Like putting together a football team or casting a movie, balance and diversity are essential. When group members are too similar, then it is less likely novel, intriguing ideas

"Sometimes the best work is produced under adverse conditions."

will develop. Too much diversity can result in pointless arguments. Puccio (1999) quoted a

recent study by McLeod, Lobel and Cox (1996) which looked at how ethnic diversity impacted the quality of ideas for solving a realistic problem. They concluded the ideas produced by eighteen diverse teams were more feasible and effective than the ones produced by sixteen all-Anglo teams.

Ethnic diversity isn't the only important factor. Carefully consider the characteristics of potential team members and balance introverts and extroverts, quick decision-makers and others who like to weigh alternatives, intellectuals and emotional individuals. If unsure of characteristics of candidates, some tests such as the Meyers-Briggs can be helpful in the selection process.

Goals and Deadlines

Part of the mantra of organizational advice has been that goals need to be articulated clearly and deadlines established. The logic of this advice is that procrastination can force the selection of an idea based on expediency rather than on looking at a number of options and exploring their potential. However, in actuality there are no set rules in creativity. Sometimes the best work is produced under adverse conditions. *Casablanca* was written as the movie was produced. Other movies have been rewritten a hundred times and didn't work at all.

Gersick (1995) examined how deadlines affect group decision-making. She found a strong tendency for groups to wait until a crisis was in the air before they really pushed forward with a decision. This usually occurred at the midpoint between the start of the project and its deadline; however it isn't clear if and how the quality of work is influenced by last minute pressure. The challenge is to pace the team so that there is enough time for ideas to develop.

Communication and Conflict

Communication problems can begin if members come into the group with their own agendas. The team needs to form an identity where the project becomes more important than each individual's need to defend their turf. If a curator can only think of presenting information in a traditional manner, then there is going to be a limitation on the creativity of the designer. If a designer wants to be creative at the expense of imparting vital information, unproductive conflict can ensue. A newly formed team needs time to coalesce as members get to know and trust each other.

Creative collaboration almost inevitably results in differences of opinion. The ability to openly communicate ideas and challenge others is a very important condition for team creativity. Garry Marshall (1994), who produced many successful situation comedies, wanted conflict during writer's meetings:

I approved of and encouraged arguing around the writing tables, even if I had to play the referee. We ran our script meetings by Samuel Goldwyn's philosophy: "Polite story conferences lead to polite scripts." Fighting is good.

A number of research studies in industry have suggested that conflict is a key ingredient in allowing teams to function at their best. An important caveat is that the conflict should not become personal. Eisenhardt, Kahwaj and Bourgeois (1997) compared the qualities of four teams in companies that handled conflict successfully with four companies where teams had problems working together. They identified six implicit factors which differentiated the teams that worked well together:

- They used more information and debated on the basis of facts.
- They developed multiple alternatives to enrich the level of debate.
- They shared commonly agreed upon goals.
- They injected humor into the decision process.
- They maintained a balanced power structure where the CEO was more powerful than the other members of the top-management team, but all executives participated in strategic decisions.
- They resolved issues without forcing consensus.

Members of teams that worked well together voiced mutual respect for one another. Politics were consciously avoided. One executive stated:

"We scream a lot, then laugh, and then resolve the issue."

"We scream a lot, then laugh, and then resolve the issue." Member of teams which didn't work well described their colleagues as "manipulative," "secretive," "burned out," and "political." The authors concluded that "conflict provides executives with a more inclusive range of information, a deeper understanding of the issues, and a richer set of possible solutions."



The Selection and Development of Ideas

It is crucial to provide an atmosphere where team members feel they can submit ideas without fear. Humor can be helpful in keeping a group loose and flexible and defusing tension. A number of researchers (Wallach & Kogan 1965;

"...the amount of effort and excitement generated can be phenomenal."

Ziv 1983) have suggested that a "relaxed, positive mood" helps foster creativity. Thomas Edison

used to start each day with a joke-telling session.

Openness is essential. Team members need to feel they can make unusual and sometimes impractical suggestions, especially in the beginning of the process. If leaders make negative judgments, team members won't feel they can safely make off-the-wall suggestions. Phrases and body language that express skepticism or reject ideas quickly will cause members to withdraw and play it safe. Whenever an idea is proposed, it should be received with as much support as possible. Members of the team are much more likely to support the process when they feel their ideas have been carefully considered even if they are ultimately rejected.

Brainstorming was suggested for many years as a way of generating more ideas within a group. However, the latest research indicates that while brainstorming may help a group come up with additional possibilities, individuals thinking on their own will develop more ideas. That's because many people still censor themselves when submitting ideas in a group setting. Research has indicated that electronic brainstorming, where ideas are submitted anonymously, can produce more viable options.

Van Gundy (1984) pointed out some of the disadvantages of teamwork, including the possibility that completing the job may take more time, that riskier decisions are sometimes made, and that all members of the group may not participate.

Kerr and Bruun (1983) noted the "free rider" effect occurred when one or more less-able members of the group decide to leave the work to more talented or highly-motivated team members. In order to avoid the "sucker effect," the higher-functioning members worked less.

Social loafing occurs when people relax because they don't feel individually responsible for the success of a project. They believe they can reduce their effort because it won't be noticed. Jackson and Padgett (1982) looked at social loafing in creative collaboration by examining the work of John Lennon and Paul McCartney. Early in their career, they took joint authorship whether they wrote songs individually or together. It was only later that Lennon revealed how each

song was composed. The songs they wrote together during that time were more successful than the ones they wrote individually. After 1967, they started publicly identifying which songs were written individually or in collaboration. The result was that the songs they wrote together were significantly less successful than in the earlier years. The authors attributed this decline to social loafing.

Decision-making

When it comes to decision-making, a variety of virtues for groups are proposed by researchers. Sniezek (1992) concluded that the shared responsibility in a group situation leads to a greater feeling of confidence when decisions are made in uncertain conditions. Stasser (1992) pointed out that individuals in groups can share the task of recalling facts and each member may be able to offer unique information.

The inability to make a decision in a timely manner can create unrest and lack of confidence. A major component of effective leadership is the amount of time spent on decision-making. Pritzker and Runco (1998) interviewed four seasoned comedy writer-producers who indicated the key characteristics they valued in a leader: (a) a willingness to include others in the decision-making process, (b) an ability to keep decisions moving along at a pace that isn't too slow, (c) a nonjudgmental atmosphere, and (d) coolness under high pressure and time constraints. Clearly leadership with a strong vision is preferred over a wishy-washy approach.

Creativity is not a totally predictable or manageable process. No matter how many times an individual or team has done it before, the reality is that each new situation presents a different set of variables which requires new answers. At some point, most leaders and individuals really searching for a new answer will become afraid they just won't be able

"...the reality is that each new situation presents a different set of variables which requires new answers."

to come up with something that will work. Recognizing that this fear is part of the process is

what separates creative teams from the ones who "settle" and do slight variations of what has been done before in order to release the tension they are feeling and to provide a measure of comfort in doing the "safe" thing. Hoffman and Maier (1964) identified the phenomenon of "solution-mindedness," which is the bias to concur on a solution very early in the process and so relieve anxiety. This is especially dangerous when looking for a creative idea because a team can get excited and make much ado over what is ultimately not much.

Pritzker (1999), in researching a case study of a situation comedy, observed that the writers quickly settled on a



familiar plot because they liked the father-son scene at the end. This provided the sentimental ending that is the traditional backbone of many situation comedies. This example illustrates why so much television looks like other television. The parable that parents and children should get along has been programmed into us so deeply it generates an almost involuntary response in writers as well as the audience. It seems right because it is familiar, so a false "aha" moment can be generated where everybody is enthusiastic. This same tendency may occur in designing exhibits since often they directly imitate what has worked in the past.

Creative ideas usually take time to develop. The answers frequently come in stages, often based on trial and error. After an idea is selected, it almost inevitably changes, often ending up looking very different from the original concept. Leaders and members must step back and acknowledge when an idea needs an adjustment. The process can be very painful. Gersick quotes a Nissan designer discussing a project in progress: "We'll end up—I guarantee it—with everybody loving what we've done...but there will be all kinds of heartache and pain before we get to that point."

Putting It All Together

Once an idea is selected, the support of managerial authorities is crucial. Constant second guessing and interference will create an atmosphere which generates fear of change and fatigue, and results in less than maximum effort.

If team members feel their organization is really behind them in their search for more creative exhibits, the amount of effort and excitement generated can be phenomenal. When a team is working together, with each individual in the zone, the sum of the whole can equal more than the parts as members build upon each other's ideas. Momentum can develop as teams start becoming more creative and enjoy satisfying both themselves and the public in ways that excite the imagination and expand the possibilities of life.

"...the amount of effort and excitement generated can be phenomenal."

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Creating in Teams

by Jane Bedno

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Can a team be creative? To foster a climate conducive to creativity within a team, we must first believe that creativity is not exclusively a product of individual effort or brilliance. This seems obvious, but we have all been raised and schooled to think that it is our individual effort that displays our creativity, and that we somehow own the individual creative product. Those of us lucky enough to have worked as part of a productive team know otherwise, but the inherent bias has to be overcome. To be a part of a creative team, each team member must understand how such a team can work, and must be ready to identify with the team and its output.

In creating effective exhibitions, particularly large ones, we are virtually stuck with the necessity of teams. Developing and designing a large exhibition involves too much work for an individual to carry out solo, and the result of the traditional sequential process (curator assembles an exhibition, script is written, designer is given script to execute, educator is told to interpret the result) seldom meets the communicative requirements of the contemporary audience. Each of the *players* in the creation of traditional exhibitions is given too narrow a scope within which to work to allow for the development of a final product in which the potential of their individual disciplines is realized. Given the range of skills we must draw upon to produce a contemporary exhibit, we are past the day of the brilliant solo creator. So, how do we make the team process work?

"A contemporary team cannot be narrow in its scope and experience."

Team Organization

First, the team must be organized. A team should be able to work together, but ideally not know each other so well that they second-guess each other and create a predictable outcome. The team that functions like a family can be very efficient, but unexpected ideas are less likely to surface. A team which has some *outsider* members may be less smooth, but it is almost certain to be more exciting. This is a generalization, as there are always people who are so excited by each different project that the repetitive presence of familiar voices won't diminish this excitement.

If two members of a team actively dislike each other, the effect can be very disruptive. When working with students, I never put together people who feel active antipathy for each other, and I don't believe that you can work well, or should have to, with someone you can't stand. If two or more members of a team function in unison, this can smother the individual contribution of others. If a team consists of a number of relatively reticent members and a very assertive member, the team may fall into a pattern of following the leader. This is a particular danger if the team is allowed to become too large, over seven or eight members. If the group becomes larger, some voices will not be heard, and the team will not achieve the sort of internal cohesion that leads to successful outcome. (This is not to imply that team membership cannot change as the demands on the team change).

"A suggestion does not need to be fully coherent to be worth writing down."

I believe that members of a team function more effectively and creatively if they understand a few rules of the game. Many of these have been described under the rules concerning "brainstorming," but making team members conscious of some behaviors that may occur, and why they occur, seems to help keep the process open. The most troublesome behavior, in my experience, is negativism. I believe it is strongly linked to a feeling of relative weakness in a team member—being negative is a way to be heard. If all members of a team, including those who may play "negative," realize this, it is easier to avoid.



Another is the “natural leader” behavior: one team member asserts authority, very often as the voice of reason, advancing a specific point of view, and, once some backers are found, insisting on acceptance of that point of view on a consensus basis. It is terribly important for team members to realize that the desired team product is not the one that everybody can live with, but the one that will create the most exciting and satisfying outcome.

Now, to cut to the chase. The team has been organized. It is a mix of people with different skills and experience, who at least have the potential of getting along with each other. The project has, in the broadest sense, been identified. How do we get optimum creativity out of the process?

Priming the Team

The team members have to have enough knowledge to proceed, and have to feel excited about the potential of the project. In the commercial world, the element of competition is often introduced to produce this excitement, but the only people who compete in the museum world are teams from competing exhibit consultancy firms, responding to RFP’s. I have often thought that, in large museums, it would be interesting to introduce this competitive aspect. But enough said, as this is not a very likely development in the always over-busy museum exhibits department. How else, then, to produce excitement? When working with a collection, the team members should be shown the highlights—collections are exciting. Travel to related exhibits can generate some of the competitive instinct, and can make team members feel that their assignment is being taken seriously by their institution—and they must feel that the institution is serious. Travel always lowers the barriers to seeing the new and different,

and helps prevent the filtering out of interesting ideas.

“The synergy of a group working together can produce wonderful results.

It can also be a disaster.”

Before the process starts, all team members need to be *primed*—they need to know the basic content range within which they should address their

efforts, what the institution hopes to achieve with the result, and what kind of audience they are aiming at. I don’t believe the team should be expected to become experts (indeed, experts frequently are often too familiar with the problems and ambiguities of their subject to come up with the great ideas as to how to communicate it effectively). But if team members are given the information available to informed lay people about the subject at hand, and are shown relevant collections, both some time in advance of meeting as a group, their meetings will be far more productive. In the meantime, their individual brains have made connections between the information they have been

given and their own experience. These connections are not made instantaneously—I think we all need to dream and daydream on them. A creative team needs time for information to filter down, and for the individual members’ brains to make unexpected connections. This may happen in the middle of meetings, but typically doesn’t.

“An exhibit is a very special kind of work of communication art.”

An institution which doesn’t allot appropriate time and budget for team efforts is showing that it is not truly serious about getting the best product out of the team. This time must include preparation as well as team meeting time. No one will be truly creative when they are asked to continue thinking about many other responsibilities while engaging in a serious creative process.

I would encourage team members to *browse* in other media which may trigger interesting connections and analogies—give them suggested books, films, exhibits, - anything which can get the mind working. The most important single tool that developers and designers carry to the team meeting table is their visual memory, and institutions utilizing teams will benefit from encouraging the broadening of such memory in their staffs. Creative exhibit planners and designers must be discouraged from compartmentalizing. All experience, particularly sensory experience, should be grist for our mill.

Team Meetings

Now we are ready for actual team meetings. The physical and mental setting of team gatherings must be conducive to concentrated effort. This means the obvious—chairs in which it is possible to sit for some time, lots of paper and writing implements (I am a personal believer in large file cards and thick black pens which are very visible and discourage erasures), a central table on which team members can write, see what others have written, and try out relationships of notes, no incoming phone calls, some kind of an agenda. It is also extremely helpful to have a large wall bulletin board on which cards can be pinned when interesting relationships are established.

I am a personal believer in comfort food—order-in pizza, for example. Some kind of time frame should be preset, so that members of the team do not begin to fall away in

“The desired team product is not the one that everybody can live with.”

exhaustion and stop actively participating—as they may if the meeting length is open-ended. I don’t believe that an effective meeting can go on for more than three hours, and that most of the *good stuff* will come out in two. But too short a meeting length is equally damaging. All day meetings are sometimes an



effective approach, but the subject matter of the second three-hour session needs to be clearly differentiated from the first. As I said before, the individual brains need time to sort and absorb the information and ideas from a meeting, so real breaks (one or two days, at least) should be fixed between creative sessions.

"We all need to dream and daydream."

A well-functioning team will become a fairly cohesive group quickly, the members building on each other's ideas to create new ones. The presence of a referee/coordinator early in the process will be helpful. This person should not be asserting their own view of the desired product, just helping the team interact smoothly. It is often initially difficult for individual team members to relinquish their ownership of their ideas, and they are uncomfortable when another team member uses an idea as a jumping off point for a new concept. Once every individual on the team has become integrated into the team as a whole, this problem tends to diminish or disappear.

How Teams Create

I have spent a lot of space discussing the nature of a creative team, and the preconditions that lay the groundwork for creativity. How does the team create?

The individuals making up the team will show a personal style in approaching creative solutions, each somewhere on a continuum between two extremes. One extreme is the participant who will add small ideas and pieces together, coming up with building blocks leading to a structure. On the other extreme is the *big picture* thinker, who comes up with overall pictures with huge gaps and unsolved questions within them. Most team members will show an inclination toward one or the other of these extremes, and these extremes must understand, respect, and make use of the skills of those who process differently. I am personally convinced that the best exhibits are created by teams where both extremes exist.

I mention an agenda. The initial *priming* documents have given a basic outline of the subject matter at hand, some identification of the expected audience, and the institutional goals which have triggered the decision to develop the exhibit. A simple, straightforward agenda should be developed which takes the team through the progressive stages of developing the exhibit concept. The team will need to identify the problem that the exhibit addresses, decide on the exhibit mission, frame its basic narrative, decide on its organizational basis. A working title is useful. All of these tasks should be addressed, and the agenda will serve as a checklist to help make sure that they are. The team can develop its own agenda, although the guidance of a coordinator is likely to

be helpful. Although ideas should never be stifled, the discussion should also be focused on the desired outcomes (as identified in the agenda), and should not be allowed to completely ramble. The team should undertake a series of tasks, and the first, and most important, can be to find definitions of the problem at hand. The range of possible identifications of the preliminary problem can be surprising, and often eye-opening to fellow team members (for example, one may see the problem entirely within a social, community-centered frame, another may be fascinated by the physical possibilities inherent in the display of a collection of objects, a third may be deeply involved in historic context). Very often, these disparate identifications of the problem suggest a productive group definition of the task to be undertaken which can carry the team to the next stage.

At every point, it is useful to have team members write down ideas and suggestions on individual pieces of paper (as I have mentioned, I like file cards). A suggestion does not need to be fully coherent to be worth writing down. Images and ideas that resonate unconsciously may be very productive. A film seen that seems to bear upon the problem in a way that is not yet clear, an analogy not fully realized, an interactive technique used in a dissimilar exhibit, drawing team members' attention to a particularly evocative artifact—all can be useful. These pieces of paper take on a life of their own, independent of their authors, and may, by being rearranged, suggest useful relationships. The act of creativity in humans is profoundly involved with the recognition of relationships where they have not been previously seen.

By suggesting that these be written, I am not inferring that they not also be spoken. Throwing them into the team *pot* will generate productive initial discussion, which, in turn, will lead to more spoken and written ideas.

Little, seemingly trivial, ideas may surface at any point. These should not be discarded, as many of them will add richness later in the process.

"Creativity is not exclusively a product of individual effort or brilliance."

The team should be working with a *full hand*, thinking about all the possible ways in which an exhibit can be enriched. The mix on the team will help it address the range of possible modalities—and I believe that a contemporary team cannot be narrow in its scope and experience. Issues of the relationship between programming and the physical nature of the exhibition, environment, immersion, cultural tourism, the uses of theater, dialog with the audience, the audience's role in exhibition development, the uses of collateral material, to mention but a few, should be represented in the discussion by members of the team. On a creative team, every member



will be introduced to new ideas and possibilities beyond those which they brought to the table.

A certain number of questions may help the team broaden its scope of inquiry: Does the exhibit have a voice? What can/should it be? What is its gestalt (what overall personality should it convey)? What kind of experience will it be for the visitor? What kind of emotional load and intensity is being aimed at? There are an infinite number of such questions—they are really just discussion triggers. Anything which is open for the team to discuss can and should be discussed, and may produce exciting possibilities.

Getting the Best Product

My experience has shown me that teams can come up with ideas that would not be predictable from any individual on the team, and that the synergy of a group working together can produce wonderful results. It can also be a disaster,

"All experience, particularly sensory experience, should be grist for our mill."

and frequently (when the group adopts a consensus way of operating) results in true mediocrity, far below the possibilities inherent in the gifts of individual members of the team. Social sciences have taught us that a team effort by brilliant team members can result in the most wrong-headed possible outcome due to the team's enthusiasm overriding the common sense of its individual members (a classic reading required of graduate students in administration describes the process by which a brilliant team of national leaders talked themselves into staging the Bay of Pigs invasion of Cuba, which virtually every member of the team, individually, thought was a bad idea. We have all seen more recent examples of this kind of *grouptink*).

The bottom line, however, is that a well-constructed, well-managed, excited team can create an exhibition the like of which the museum world has never before seen. The techniques are still being developed and learned, but we already know that they work. It isn't rocket science yet, in fact it is not yet a science of any sort, and I'm not sure I would want it to be. An exhibit is a very special kind of work of communication art, and the use of skilled teams in exhibit development and design will keep this communication/art form growing and changing. I know that I will see exciting exhibits in twenty years embodying ideas of which I could not possibly conceive at present, and that teams will have created them.

SOME RECOMMENDED READING:

A great book on the whole process:

Kathleen McLean. *Planning for People in Museum Exhibitions.* Washington, DC: Association of Science-Technology Centers, 1993.

Books on how to produce creative ideas:

James L. Adams. *The Care and Feeding of Ideas.* Reading, MA: Addison-Wesley Publishing Company, 1986.

James L. Adams. *Conceptual Blockbusting.* Reading, MA: Addison-Wesley Publishing Company, 1979.

Edward deBono. *DeBono's Thinking Course.* New York: Facts on File, 1982.

Edward deBono. *Lateral Thinking: Creativity Step by Step.* New York: Harper & Row, 1970.

The Diagram Group. *The Brain: A User's Manual.* New York: Berkeley Books, 1984.

Betty Edwards. *Drawing on the Right Side of the Brain.* Los Angeles, CA: Jeremy P. Tarcher, Inc., 1989.

David D. Edwards. *How To Be More Creative.* Campbell, CA: Occasional Productions, 1980.

William J. Gordon. *Synectics.* London: Collier Books, 1961. (*Synectics, the name given to a very "60's" approach to creativity by its creator, William Gordon, has resurfaced as a very useful system for producing creative results. I have never stopped using it since I was first exposed to it in the 60's.*)

Don Koberg and Jim Bagnall. *The Universal Traveler.* Los Altos, CA: William Kaufman, 1974.

Robert H. McKim. *Thinking Visually: A Strategy Manual for Problem Solving.* Palo Alto, CA: Dale Seymour Publications, 1980.

Robert H. McKim. *Experiences in Visual Thinking.* Monterey, CA: Brooks/Cole Publishing Company, 1972.

Nicholas Roukes. *Design Synectics.* Worcester, MA: Davis Publications, 1988.

Donald A. Norman. *The Psychology of Everyday Things.* New York: Basic Books, 1988. (*How human factors get ignored in design.*)

Richard Saul Wurman. (Any of his publications are useful and interesting.)

Books on team process and interactions:

Irving L. Janis. *Grouptink.* Boston, MA: Houghton Mifflin Company, 1982.

Jon R. Katzenbach and Douglas K. Smith. *The Wisdom of Teams.* New York: HarperCollins, 1993.

Peter Senge. *The Fifth Discipline.* New York: Doubleday/Currency, 1990.



Responsibilities of the Creative-Project Leader

by D.D. Hilke

D.D. Hilke received her Ph.D. in Cognitive Psychology from Cornell University. She is currently Director of the Exhibits Division at the Denver Museum of Natural History, and previously served as Director of Exhibits at the Maryland Science Center and Director of Audience Research at the National Museum of American History. She may be contacted at: Ddhilke@dmnh.org.

"Creativity is hard, scary work."

The first draft of this paper emerged during a moment of seeming clarity when a project had just recently come to completion ("Beyond Numbers" at the Maryland Science Center) and the process, with all of its intervening successes and failures, could be seen in sharp relief. In a mental rush of lessons learned, a number of responsibilities of the creative-project leader found their way onto a sheet of paper and a number of "rules of the road" were penned.

Now, some three years later, I look back at the list with mixed feelings. More years of experience leave me convinced that it is a useful list. Some of the same experiences remind me of how difficult it can be to follow such advice (even when it is your own). Difficult or not, we who direct creative projects owe it to our teams to try, and like it says below, eventually to fail our way to success. Although still learning, I offer here my favorite selections from this list.

Keep the Lions at Bay

The creative team must be insulated from individuals or institutions with vested interests in the project. Obvious examples include overzealous content advisors, nervous museum directors, bureaucratic bean counters, partnering institutions, and funding agencies. While the project leader will need to hear from and respond to multiple constituencies in executing the project, the project team cannot, without losing its focus and cohesion.

Rule of the road: Feed the lions (something other than members of the creative team).

Point Towards the Goal

This one is obvious and essential, but we all mess it up time and time again. It is the project leader's job to clearly communicate WHAT the creative team is charged to produce (e.g., an exhibit, program or institution), any CONSTRAINTS that must govern its process or outcome (e.g., predetermined topics, partners, institutional goals for the project, resources, time constraints, etc.) and WHY (e.g., the personal impact it will have on individual visitors, the difference it will make to the public good, the way these impacts reflect the mission of the institution and the reason why each team member's profession supports these goals).

Rule of the road 1: No matter how talented, the team told clearly to go "north" is less likely to end up at the south pole than the team told to simply "get to work."

Rule of the road 2: If the North Star (that's you, oh leader) moves around in the sky, it's very hard for anyone to navigate.

Provide Limited Resources

The creative team needs clear information regarding the resources that are and aren't available to the project. Clear articulation up front regarding how much money, staff, time, space, objects, expertise, etc. are available to the project will help scope the project for the team. The project immediately takes definition as large or small, rich or poor, doable or impossible—and even in those cases where the project seems too small, too poor, and too rushed to be loved, the team begins to own the project because they know what it is, what it is not, and that it is theirs. Failure to make clear statements up front regarding resource allocations leaves the team uncertain of management's intentions for the project, unclear regarding what they can and can't expect, and adrift in a world of possibilities that are not anchored in reality.



**"Date your ideas
and be willing to
love 'em and
leave 'em."**

Rule of the road: While limited resources result in greater creativity ("necessity is the mother of invention"), the savvy leader keeps a small pot of gold available to support rainbows as needed.

Demand Excellence, Teamwork, and Innovation

Excellence, teamwork, and innovation are defining characteristics of successful creative teams, but can we really demand them? Creativity is hard, scary work. It is especially hard for a team where multiple criteria for success must influence the final product and where there is no product that models that success (i.e., in most exhibit projects). What project leader has the right to be uncompromising in setting expectations for excellence in light of such a daunting task?

The paradox here is that the work is just too hard to do under less demanding circumstances. Exhibit developers will reach into themselves and do nothing short of the miraculous at great personal sacrifice for a vision they believe in and for one that demands and produces excellence. Conversely, no one wants to invest hours of hard work and make untold personal and professional compromises for anything less than a product that they can be truly proud of.

Rule of the road: Just because it's never been done, doesn't mean you can't do it, and do it well.

Fail Your Way to Success

Even on a short timeframe, invoke a process that allows unusual and half-baked ideas to emerge and be tried out with real visitors (and management) even when not supported by the entire team. As the leader, live the truth that what doesn't work is just as informative as what does. Expect that the final design will overcome the shortcomings of these experiments and retain their strengths. Equally important, however, expect the developers to be learning why one thing worked and another didn't. Keep this process going to the very end of the project if time allows. The confidence that the entire team will gain in themselves and their product will become empowering and self-feeding. Opening jitters will turn into opening day excitement.

Rule of the road: Encourage limb sawing. When developers go out on a limb and saw it off behind them... if they fall, they have learned an unforgettable lesson in physics... if they float, they (and therefore your team) have achieved what all thought was impossible.

Parent the vision

If the project's goals are the WHAT, the Vision is the creative project's HOW. Contrary to the desires of development directors and production managers, visions are not created in a day or even in seven days. They evolve. The vision

begins as the sketchiest of ideas and a lot of IOU's. It grows to maturity through completely unpredictable contributions of the creative team and with careful nurturing and heartless pruning by the project leader. The vision is the project's goal made ever more real through bits and pieces of real product first imagined and eventually pieced together into a truly workable whole. Oftentimes, the only way that the creative team recognizes its progress is by comparing the richness of this month's evolving vision with the paucity of the vision they had last month. Until, in the end, the vision becomes the final product, visitors play their part, and it is done.

Rule of the road: The evolving vision must occupy a place of honor in the mind of the project leader and in the minds of the creative team. It is the current embodiment of the project's mission and the promise of its future realization. Its cohesion and promise, no matter how tentative, is the soul of the creative team.

Delegate Ownership and Responsibility

Good management is synonymous with effective delegation. While important to any project, I've come to believe that it is paramount in the creative project.

The people who work at "Hands On" have a good analogy for the relationship between creative developers and the ideas that they create: it's a dating relationship, and it is full of all the excitement, anxiety, unrealized potential, and emotional involvement that goes with such a relationship. Their good advice to developers is to recognize up front that this is NOT a lifetime commitment. You must date your ideas and be willing to love 'em and leave 'em for an idea that's better for the project. What does this have to do with delegating authority and responsibility?

Rule of the road 1: Only the person really responsible for a particular part of the vision can be expected to have the discipline to have safe sex with a really hot idea.

Rule of the road 2: Only the person really responsible will be willing to take the homely idea out on a date long enough to discover if there is a hidden gem of an idea just under the surface.

Retain High Level Decision Authority

The project leader can never relinquish final authority nor relinquish responsibility for the progress toward the goals of the project. Furthermore, since the Vision is the evolving embodiment of these goals, the project director has primary responsibility and decision-making power for both the process by which the vision evolves, and the content of the vision at major milestones along the way.

Rule of the road: The decisions of the Project Leader have enormous leverage. Use this leverage rarely and wisely.

NAME AT AAM



AAM Annual Meeting & MuseumExpo99

Cleveland, Ohio
April 25–29, 1999

Sunday, April 25

9:00 a.m. — 12:00 p.m.

Pre-conference Workshop
Rekindling the Spark: Renewing Your
Personal and Professional Creativity
Pre-registration required.

12:30 — 4:30 p.m.

Exhibit Development Roundtable
This ad hoc group meets to informally discuss exhibit issues. The group will create its own agenda. Bring your own hot topics!

12:30 — 5:00 p.m.

Executive Board Meeting

7:00 — 10:00 p.m.

Reinventing the Party
At Dick's Last Resort in the Flats, the place to go to have a good time in Cleveland. Dinner, dessert, transportation and live music.



N A M E Sponsored Sessions

Monday, April 26

9:00 — 10:15 a.m.

Does Designer Heritage Affect Design?
Museum professionals who recognize that exhibit content isn't crossing cultural lines often try to solve this problem by encouraging and recruiting designers from diverse cultures. Does the heritage of the exhibition designer alter the result? Are designers affected by their heritage, or is design ultimately so personal that it transcends cultural boundaries? The panel will address these questions along with a variety of design oriented issues concerning color, balance, and other elements..

10:30 — 11:45 a.m.

The Museum as Public Place
A recent exhibition at the National Building Museum cited examples of museums that have played a key role in revitalizing downtown areas. This session will examine the role of the museum as a public place - as civic architecture, gathering place, and community forum. Participants will learn about designing museum interiors that are attractive and enjoyable public gathering places and strategies for engaging a wide spectrum of the community in planning an expanded and renewed institution in an urban setting.

3:30 — 5:30 p.m.

New Attitudes: Media and Materials
Display aesthetics are key to any successful exhibition. When selections in materials, treatments, and general atmosphere are congruous to content, the exhibit becomes a more compelling experience. This marketplace will showcase innovative uses of materials by professionals who are exploring ideas with sounds and surfaces. Conversations with delegates will emphasize how chosen display methods have been related to exhibit planning and why aesthetic effects were considered an integral part of the final product.

Monday, April 26

3:30 — 5:30 p.m.

Eleventh Annual Exhibit Competition

The marketplace will feature the winners of the exhibition competition, sponsored by CurCom, CARE, and NAME. Judges describe the evaluation process and summarize why the winning exhibitions are considered to be excellent. Representatives of the winning institutions describe their exhibitions through narrative and visual media. Participants have an opportunity to discuss with the winners strategies and processes that lead to successful exhibitions and to inspect displays of catalogues, media, educational, evaluation, and publicity materials.

Tuesday, April 27

7:30 — 8:30 a.m.

NAME Business Breakfast

9:00 — 10:15 a.m.

Will Design for Food— Exhibits Services for Hire

The challenge to many museum departments is finding a way to become more self sufficient and contribute to the museum's bottom line, while also fulfilling the institution's mission and goals. Museums have certain (perceived) advantages that often make them ideal candidates for exhibit design services contracts. Panelists will present their experiences in pursuing, winning, and fulfilling exhibit design and fabrication contracts. They will also discuss some non-financial but important benefits of exhibit contract services; explore how their institutions' missions are served by doing "outside" projects; and demonstrate how small museums and under-served audiences ultimately benefit from revenue-generating projects.

2:00 — 4:45 p.m.

Designing Exhibit Designers

Demographics are changing, we are barraged by growing amounts of information, and people place increased value on the use of their free time. How will exhibition designers keep up with such changes? What base of knowledge do they need? Can they get this information from school, or do they need practical experience? In turn, what should specialized training for a museum exhibition designer include? This session will address these issues through discussion of three current programs that are teaching exhibition design at the graduate level.

Wednesday, April 28

2:00 — 3:15 p.m.

What's Going On: Hot Issues in Exhibit Development & How to Deal with Them

This session will engage the audience in fun, real-time problem solving regarding issues that are relevant to exhibit developers, designers, and other collaborators. The basis for this interactive session will be the issues identified and discussed at the Exhibit Development Roundtable held on Sunday, April 25. Panelists will address the top three issues identified at the roundtable and, with the help of the audience, create a perfect world scenario in which all of the issues are addressed and the museum is reinvented.

3:30 — 4:45 p.m.

Reinventing the Label

Despite extensive research conducted on museum interpretation over the past several decades, the museum label remains the voice of the museum. As such, it remains deeply embedded in a museological ideology that is still often exclusive, top-down, and resistant to change. This session will examine the problems of the museum label and present new means to interpret museum objects that give the visitor a real voice in the museum setting. The panelists are known for their innovative approaches to museum interpretation in general and their label texts in particular; the exhibitions they curated have attracted international attention.

Thursday, April 29

8:45 — 10:00 a.m.

Go Ahead, Criticize: Why We Need Exhibition Criticism

For nine years, participants in the popular annual meeting session, "Critiquing Museum Exhibitions," have debated the strengths and weaknesses of exhibition practice. In this session, panelists will explain why exhibition criticism is uniquely qualified to help us understand our successes and failures in both process and outcome. Panelists will propose a definition of exhibition criticism, distinguishing it from evaluation, peer review, promotional writing, and professional press review. Participants will consider questions that have been raised frequently in the critiquing session.

Thursday, April 29

10:15 — 11:30 a.m.

**Opening Doors of Communication:
Speaking the Language of Rural and Urban
Audiences in Science/Natural History
Museums**

Museums serve as storytellers for a wide variety of audiences. The best bards and storytellers are distinguished by their ability to tell their stories in a language appropriate for the specific values and interests of their listeners. This panel will discuss the types of language that can open channels of communication, versus language that shuts them down. The session will present examples from science centers and natural history museums. Panelists will also address different techniques for communicating with rural and urban audiences.

12:15 — 1:45 p.m.

NAME Issues Luncheon

1:45 — 3:00 p.m.

**Case Studies for Inclusion: Developing
Universally Accessible Exhibits and
Programming through Partnerships**

Speakers will share their experiences with innovative projects that encourage inclusion of people with disabilities. The session will present a variety of case studies and approach including collaborations with individuals and organizations from both inside and outside the museum field. The juxtaposition of U.S. and U.K. initiatives and the international experience of the presenters will encourage discussion and comparison of cross-cultural approaches to universal access issues and challenges. Case studies include the new interpretation galleries for the Parthenon sculpture at the British Museum; a vocational course for people recovering from mental health problems; and a video training package demonstrating accessible exhibit and information design for cultural institutions.

1:45 — 4:30 p.m.

Critiquing Museum Exhibitions X

Continuing the tradition of providing a forum for exhibition criticism at the annual meeting, this double session will critique the Rock and Roll Hall of Fame. At the first session, members of the exhibition team will present the intent of the exhibiting institution and the process of development and design. At the second session, three museum professionals will present their critiques of the exhibition. The audience will have time for questions and discussions at the end.



**N A M E
Co-Sponsored
Sessions**

Monday, April 26

9:00 — 10:15 a.m.

**A Different Point of View: Establishing a
New Identity for Your Museum's Collection**

As they mature and begin to establish their presence in their community, many museums find their acquisitions becoming less reflective of their original collection installations and sometimes only peripherally related to their original mission. Because exhibitions are typically the primary means for demonstrating the museum's emphasis to the public, disparities between a museum's interpretive activities and what it collects can create confusion about the institution's role and its relevance to its community. Panelists will discuss recent efforts to change their institutions' collection and exhibition emphasis and the public response to their efforts.

10:30 — 11:45 a.m.

**Out From Under the Roof: Preparing for
Consultant Roles in Museums**

The trend towards out-sourcing and using independent professionals is well underway in museum life. In this session, professionals in the design, education, and administration fields will raise issues surrounding this trend.

**Seeing Naturally: The Challenge of Visual t
Or Literacy in Natural History Exhibitions**

While natural history museums have long included visual literacy in their programming, they have not applied it to their exhibitions. By incorporating visual literacy into exhibitions, natural history museums can provide visitors with science process skills and make natural history collections accessible to wider audiences.

**Attracting Younger Audiences: Must
Multimedia Games Be Disruptive?**

Can younger audiences be cultivated through the use of computer-based games and learning materials? If so, can an exhibition retain audiences of all ages when multimedia experiences are distributed throughout an exhibition? Panelists will explain why computer technology, along with printed materials and guided tours, was chosen as a component of an overall visitor education strategy.

Tuesday, April 27

9:00 — 10:15 a.m.

Exhibitions and Marketing: Old Enemies, New Friends

A good relationship between the product side of the museum (exhibits and programs) and the message side (marketing) is often construed as good sequential performance, with minimum turf war. In the information age, however, this model may be too narrow. The simultaneous teaming of these areas can open vistas of potential with which to build a better future for the institution.

Electronic Surveillance Versus Staffed Posts

This session addresses the proper application of electronic devices in security management and identifies areas that are appropriate for the application of electronic devices versus those that are more suited to the use of staffed posts.

Creative Methods of Exhibiting and Interpreting Textiles and Costumes

Exhibiting fragile costumes and textiles often requires additional labor, heightened conservation considerations, and increased expenses. Therefore, they are often excluded for consideration in exhibitions. But visitors enjoy learning about the everyday wear of past eras or special design aspects used in the home. Panelists will detail creative methods of interpretation and exhibition design; slides from museums across the country will highlight some of the latest exhibitions. The session will address materials including Native American dress, ballet costumes, designer clothing, textiles for adornment, rugs and carpets, bed coverings, and other household textiles.

2:00 — 3:15 p. m.

A Look Toward the Future: Recent Research by Graduate Students

As today's students combine their studies of museums with contemporary thinking about communication, psychology, and learning, they often produce cutting-edge work. In this session, a Bank Street College of Education graduate will describe how she created an inter-generational self-guide of the architecture of the Solomon R. Guggenheim Museum. A Ph.D. candidate at Michigan State University will present his "Attention Model for Museum Exhibits" that attempts to explicate the "hook" that focuses visitors' attention on a particular exhibit or exhibit element. Finally, a Ph.D. candidate at Indiana University will present findings from a study that examines visitors' optimal experiences with interpretation.

3:30 — 4:45 p. m.

Web Exhibitions: Practical and Philosophical Or Considerations

In contrast to on-site exhibitions, Web or on-line exhibitions are a relatively new and increasingly popular type of museum project. What is their real purpose and benefit? What audiences do they serve? What do virtual exhibitions look like? How do they affect an institution's educational goals and overall mission? What impact do they have on museums' budgets, staff resources, and organizational structures? Panelists will offer specific hints and useful guidelines for doing Web versions of museum exhibitions and will address general philosophical and pedagogical implications of these exhibitions for museums.

Wednesday, April 28

2:00 — 3:15 p. m.

Programs in the Digital Environment: Implications and Issues for Museums

This panel will discuss issues facing museums as they consider programmatic use of interactive technologies. Why are they using new technologies? Are there avenues for achieving greater relevance in contemporary society? What are the relationships of digital media to traditional forms of communication and interpretation? This session will examine how museum philosophies, priorities, interpretive aims, and audience needs are affecting interactive program decisions.

3:30 — 4:45 p. m.

Deck the Halls: Christmas and Holiday Exhibits in Historic House Museums

Christmas and holiday exhibits and decorations, almost universal among historic house museums, present a number of challenges for institutions large and small. Curators may struggle with the questions of whether to use live plants and greenery, to adhere strictly to historically documented practices, and how best to integrate volunteer or community groups in holiday exhibits and activities. This program will discuss strategies to help institutions analyze their situations and design successful holiday exhibits and programs.

Generation X: Attracting a New Breed Of Museum Users

This session will address the different motivational factors that affect "Generation X" individuals when they choose leisure experiences. This large segment of the modern museum audience responds to new stimuli and to a different pace of information presentation. Attracting "Generation Xers" into museums and convincing them to return is a major concern for many institutions. This session will examine public relations aspects of museum messages and exhibition presentation for this audience.



Some Useful Books on Creativity

by Ivonne Chand

Ivonne Chand is a research psychologist at the University of California, Los Angeles, and is currently completing her Ph.D. in creativity studies at the Claremont Graduate School. She can be contacted at cbandivonne@earthlink.net.

One key to enhancing a team's creativity is learning how to recognize and break through conceptual blocks or barriers. These barriers are habitual ways of doing or understanding something, behaviors that we subscribe to without even thinking about them. They seem so natural and obvious we can't even imagine that other possibilities might exist. By recognizing and breaking through these barriers, new associations can form, which may result in original, innovative solutions. Here are some examples of the many publications now available that provide effective techniques to help in conceptual blockbusting.

In *Creativity is Forever*, Gary Davis incorporates examples from classic film plots and ancient mythology to identify a number of different strategies for generating surprising clusters of factors that might lead to new solutions. For example, he describes how the writers of the old "Lone Ranger" radio show used a matrix of different types of story elements to stimulate ideas for new scripts.

Roger Von Oech's *A Whack on the Side of the Head* is a provocative guide to changing perspectives. Readers are challenged to take risks, seek ambiguity and make mistakes, with the ultimate goal of speeding along the process of achieving creativity nirvana. His *Creative Whack Pack* incorporates the same techniques in a deck of illustrated cards from which you draw at random to get yourself into action. Each card provides a specific strategy and an example of how it's helped someone to creative success.

A number of books approach team creativity from the perspective of understanding the personalities involved. *Six Thinking Hats* encourages team members to take turns holding different points of view. Each distinct perspective is illustrated through the use of a colored hat—e.g., a yellow hat represents positive, constructive thoughts. A team member wearing this hat is allowed only to express ideas consistent with this perspective. Team members rotate the hats/perspectives, allowing for participation of the entire team.

In *Tips for Teams* the following types of questions are addressed: How do you make a team decision when people strongly disagree? What do you do when team meetings seem like a waste of time? What do you do if people don't implement the team decision? *Teams at the Top* provides detailed case studies of teams that championed creative technologies. The books by Caroselli and Michalski offer further useful tips.

Every team is a unique combination of expertise, experience and knowledge, and no one technique will work successfully for every team or on every occasion. The only "right" technique is the one that turns out to work for *you*, so dip into a wide range of books such as these, and watch those conceptual blocks crumble away!

Mariene Caroselli, *Great Session Openers, Closers and Energizers*, McGraw-Hill (1998).

Gary A. Davis, *Creativity is Forever*, 3rd edition, Kendall/Hunt Publishing Company (1992).

Edward de Bono, *Six Thinking Hats*, Little, Brown & Co. (1985).

Kimball Fisher, Steven Rayner and William Belgard, *Tips for Teams*, McGraw-Hill (1995).

Jon R. Katzenback, *Teams at the Top*, Harvard Business School Press (1997).

Walter J. Michalski, *40 Tools for Cross-Functional Teams: Building Synergy for Break Through Creativity* (Volume 2), McGraw-Hill (1998).

Roger von Oech, *A Whack on the Side of the Head: How You Can Be More Creative* (Revised edition), Warner Books (1998).

Roger von Oech, *Creative Whack Pack*, United States Game Systems (1993).



Nurturing Expansive Thinking Among Interdisciplinary Teams

by Laura Wendling

Laura Wendling, Ph.D. is an assistant professor in the College of Education at California State University, San Marcos who specializes in museum education. She also serves as University Director for the San Diego Museum of Art's "Teacher Art Education Program".

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Moments of great inspiration sometimes arise in crisis situations, or just appear out of nowhere while driving, showering, or drifting off to sleep. However, cultivating creativity in the workplace takes creative management, especially when interdisciplinary teams are involved. Here are eight suggestions, based on common sense principles, for boosting creativity and expansive thinking within your team.

(1) Setting Up the Scene for Success

Many environmental factors influence the degree of inspiration and productivity of team members. When setting up your meetings, consider the following factors:

Time of Day. Most persons work best during the morning hours. Ask team members when they feel most alert and then try to arrange your meetings at these times.

Location. When possible, retreat with your team to a location outside the museum. It is amazing how powerful a new venue can be for mobilizing new mindsets. If you can't leave the museum setting, use a room that is spacious, comfortable and quiet.

Distractions. Team members will not be able to focus well nor be fully engaged in the creative process if they are distracted by ringing phones and other interruptions, as well as if they are thinking about preparations needed for another project or a following meeting. Bring your team together at times when members do not need to rush off to other assignments.

Nourishment. Don't forget to take care of the basics! It's hard to think when you are hungry. Be sure the setting has ample nutritious snacks and beverages to keep energy levels high.

(2) Wanted: Creative and Collaborative Thinkers

Personal Characteristics. If you have the opportunity to select members for your interdisciplinary team, look for individuals who possess qualities of creative and collaborative thinkers, such as:

- an optimistic, "can-do" spirit
- an ability to deal well with ambiguity
- a willingness to withhold making quick judgments
- collegiality
- curiosity
- a willingness to take calculated risks
- an ability to engage in metaphorical thinking
- tenacity in pursuing new ideas
- a willingness to question assumptions and traditions
- an ability to take rejection of an idea in stride
- a disdain for "turf wars"
- an ability to laugh at oneself and have fun

Let members know that they were selected because of their creative abilities. A few words can go a long way towards instilling confidence and promoting a positive atmosphere.

Status. Engaging in creative thinking can be a risk-taking venture, especially when conducted in the workplace where jobs are on the line. In forming your group, take a look at the hierarchical makeup

**"What if the exhibit were
located in gravity free space?"**



of the members. When managers and their subordinates are present, keep in mind that the flames of creativity can be easily doused if subordinates worry about the judgments of their bosses.

Because the creative process often necessitates engaging in unconventional thinking that challenges traditional beliefs, it may be beneficial to arrange interactions that, for example, pair a subordinate with a person from a different department to produce a “paired” response, or allow individuals to generate ideas anonymously. A healthy climate for creativity is one in which in which all team members feel free to speak without fear of failure, rebuke or reprisal.

(3) Letting the Mind Run Wild and Free

One of the greatest strengths of formulating an interdisciplinary team is the advantage that comes with sharing viewpoints brought to the table by each department member. Begin by rapidly generating, or “brainstorming,” as many possible scenarios or solutions to the challenge without discussion. No idea should be considered too silly or insignificant. This is a time for using all senses and emotions, building upon one another’s ideas, and drawing upon dreams and wishes. Designate one member to write down key words on chartpaper, or collect ideas on a tape recorder for transcription.

(4) First Alone Then Together

There is a unique dynamic that arises when a group is formed. Although groups consist of many individuals, a sense of “groupthink” can develop whereby thought processes quickly get channeled into a narrow focus.

To avoid groupthink, first define the challenge at hand. Then, ask group members to think independently before returning to the group with their own ideas in written and/or graphic form. This method promotes expansive thinking and will give the group a wider range of possibilities to consider. Be sure, however, that members understand they are only expected to return with initial thoughts and doodles, not grand masterpieces.

(5) Playing the “What If?” Game

What if...only pastel colors were used? What if...the exhibit were located in a gravity free space? What if...all visitors were blind or couldn’t hear? What if...no written words were used—only sounds and visuals? What if...the stuffed animals in the exhibit could carry on a conversation that could be overheard? Playing the “What if?” game is another useful tool for finding new pathways of thinking that can lead to original and innovative exhibit designs.

(6) Stepping Into the Shoes of Others

A great challenge for museums is found in creating exhibits that meet the interests of a diverse audience. To anticipate the differing interests and expectations, try “role playing”

various visitor types. View your exhibit through the eyes of an elderly visitor, a visitor from a foreign county, a ten-year-old, a single parent with three young children present, etc. Consider roles that reflect differences in age, interest, background experiences, and learning styles. (Of course, you can always interview museum visitors too.) And if your team feels really adventurous, expand your thinking by taking on the roles of animals and objects.

(7) Looking All Around You

Many creative ideas come from examining the exhibit designs of other museums and then reformulating these images within the context of your own museum. Don’t be shy about “borrowing” various elements from other exhibits and then transforming them into a new format that fits your content. You can also find useful ideas by looking within your community at displays from grocery and department stores, libraries, schools, car shows, etc. These institutions cater to the general public just as museums do. You never know...a good idea could be lurking just around the corner!

(8) Bringing the Outside In

Have you ever wondered how different your dinner table conversations at home would be if you or your partner changed professions? Likewise, by inviting a community member, such as a teacher, doctor, scientist, lawyer, or environmentalist to join your team, you will encounter perspectives and questions that can stimulate new ideas for your exhibit’s design.

View every moment your team works together as an opportunity to expand the creativity of the exhibit design process and as an invitation to share in the invention of the extraordinary.

“No idea should be considered too silly or insignificant.”

**“Without the playing with fantasy no creative work has every yet come to birth”
—Carl Gustav Jung**



Laughing Till The Beer spurts Out Your Nose And Other Secrets For Successful Design Teams

by Patric Hedlund

This story is an excerpt from Patric Hedlund's 'Awakening The Shaman Wübin: A Scientific Expedition Into the Heart of Ancient Wisdom.' Hedlund is an applied media anthropologist who creates immersion experiences to facilitate team problem-solving, currently working on a film about creativity and the brain. She wishes to thank Jay Rounds for his droll wit, along with Art & Nature curator Tricia Watts and Dr. Terry Marks-Tarlow for access to their memories of events reported here.

Reach Hedlund online at www.forests.com

It was grim.

The frayed edges of professional courtesy were rapidly unraveling. We were into the ninth hour of a marathon four-day charrette to design an exhibition plan for the entire third floor of a major new museum project.

Academicians, artists, educators and psychologists from around the country had been flown in and randomly assigned to three independent teams. Each team of guest curators was given a separate conference room and told they had eighty hours to conceive and submit their most competitive design proposals.

Individuals on the teams had never worked together before. There were no pre-designated leaders. We were a collection of diverse individuals with remarkably different backgrounds and temperaments. The only thing we knew we had in common was a shared passion for the subject of human creativity. Part of the challenge was to invent our own working process.

By hour ten, personality conflicts within Team Three had slashed our early enthusiasm into bloody shreds of loathing:

He was a cognitive psychologist who had written three scholarly tomes on the subject of creativity. Analysis, classification and hierarchy were his gods. He liked flip charts and lists. It was his habit to be in charge. He tended to perceive others in terms of their potential to challenge his authority.

She accused him of letting his love for taxonomy blind him to the dynamics of the creative experience itself.

He couldn't hear her and didn't think there was much worth listening to. She was just a clinical psychologist whose book on creativity for school teachers was filled with pictures and touchy-feely exercises. Besides, she was eight months pregnant. Not a contender. Hormonally disqualified and overly impressed with chaos theory.

He assessed the other members of Team Three: a twenty-something graphic artist from Australia who believed that *Star Trek Deep Space Nine* was channeling extraterrestrial higher truths to unenlightened earthlings; an older gent with the watchful patience of a Quaker at meeting who hadn't spoken three sentences all day; a freckle-faced woman whose passion was gardens (Gardens? How did she sneak in here and what could gardens possibly have to do with creativity?); and a wild blonde cyberartist in jeans and cowboy boots who talked about brainwaves and mind music (which, I admit, is how he described me).

What was a responsible professor to do? Being associated with such people could jeopardize his career!

We tortured ourselves trying to find common ground long after night had scribbled the windows dark. By 9:00 PM we gave up. Our leave-taking was barely civil.

In the morning our hosts called all groups together to give a progress report. Team Three looked at each other in panic and disgust. We had nothing to report! The other two groups now had a major



head start on us. This was a nightmare. We were about to publicly humiliate ourselves in front of respected colleagues.

Team Three filed dismally into the larger meeting room, eyes pegged to the floor, silently furious with one another.

Team One was asked to speak first.

Their spokesman was a charming elder of the field, an aggressive, impressive raconteur from New York with encyclopedic stories of creativity research. Usually boisterous and talkative, he was oddly subdued, scrutinizing his knuckles. He stood slowly, inhaled, squared his shoulders, shifted his gaze to a fascinating fire sprinkler on the ceiling, and said bluntly: "Team One has spent the entire first day fighting. We are still chasing our tail around in circles arguing about how to begin."

Team Two leapt to their feet to give Team One a spontaneous standing ovation. They too had burned a full day mired in personality conflicts.

Arc lightning exploded up my spine. The clinical psychologist gasped. Our sci-fi fan and the somber Quaker started to grin. Our Team Three professor fell off his chair. We all burst into laughter, rolling and bumping against each other until our stomach muscles cramped, gasping and choking with tears running down our cheeks.

Over 35 years ago Arthur Koestler (1964) coined the word "bisociation" to refer to the abrupt explosions associated with laughter that can pop thinking out of a single plane into entirely new multidimensional matrices.

More than a decade ago Norman Cousins turned UCLA Medical School's focus to laughter as a momentary seizure originating in the brain that instantly enlists the involuntary and parasympathetic nervous systems to render torso muscles, the diaphragm and the respiratory system into spasm, stimulating the limbic system to secrete a medley of healthful enzymes.

Laughter crosses wires in a flash of surprise to dispel tension, calm fear and open the desire to trust--all essential for collaborative team-building.

It gets better. Scientific detectives fascinated by the relationship between brain development and the infant's earliest laughter (Schore 1994) are discovering new respect for the most ancient brain centers nestled beneath the right and left hemispheres of the cerebral cortex, such as the hypothalamus and amygdala (Goleman 1995), which govern emotions, the sense of smell and our complex filing systems for memory.

Perhaps there is substance in the old theory that most OF the world's problems could be solved rapidly if we all just had one Really Great Lunch each week, defined as one in which someone gets to laughing so hard that beer spurts out his nose. New research reveals that playful laughter stimulates neural reorganization and even the development of new brain structure.

Imaging systems used by brain researchers track laughter as a kind of short-circuit throwing sparks between formerly unrelated neural pathways. The impulse to laugh--whether triggered by a bushel basket full of frisky puppies or Team Three's abrupt situational insight--is a holographic multipoint excitor of sudden chaotic associations between fields of formerly unassociated neurons, triggering growth of dendritic extensions, stimulating neuroreceptors and pumping neurotransmitters into new circuitry.

In a fraction of a nanosecond, Team Three's laughter transformed us into a brilliant working team eager to create a masterpiece together. We traded posturing and positioning for generosity, respect and humor, alternating between raucous brainstorming and careful attention to each member's ideas. The stubborn diversity that had blocked us earlier now became our engine for productivity.

By our next report to the larger group, we'd learned to tap into the true power of synergy, using points of friction to ignite surprising fireworks of creative insight. (We'd also learned that carrot juice and jasmine tea are equally volatile in a Really Great Lunch.)

Our extraordinary work was a source of tremendous pride to us, and an inspiration to others.

Laughter, we'd discovered, is not a bad way to start a friendship, and the only way to start a demanding collaborative task.

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THEATER GAMES AS A STIMULUS FOR CREATIVITY

by D. Neil Bremer

D. Neil Bremer is a consultant specializing in museum management and visitor planning, and was formerly Director of Visitor Services at the Art Institute of Chicago. He can be contacted at dneil@bremercommunications.com.

One place to look for techniques for stimulating creativity in exhibit development is in other fields that also demand high levels of group creativity. Training programs in theater professions have long used games that are designed to generate unexpected lines of thought and emotions. Following are two such theater games that have the particular advantage of stimulating creative *dialogues*—perfect for exhibit projects seeking to engage visitors by escaping the authoritative, one-way monologues of traditional exhibit design. The group dynamics they generate can either produce specific exhibit-related content or warp wildly into non sequiter. Be open to the experience! Nothing is senseless. You may find an important truth at the edge of absurdity.

Word Builders

This is a good warm-up exercise in creativity. The group stands in a circle, facing inward. Decide on a title for your story. This could be the working title for your exhibition. Each person, in order counterclockwise, says a single word as the story goes around in a circle. The purpose this first time around is to let the story wander. Absurdity is not only acceptable, but also fun and loosens the group. To help keep the participants from “thinking” about the word, use random words. Say the first thing that comes into your mind. The goal this first time through is to develop a pattern or tempo for the group. If you have difficulty beginning, start by merely counting aloud one at a time. After a couple of rounds start saying words while keeping the established tempo. As the group progresses, try to avoid the easy words, like “I”, “the”, or “and,” thus minimizing run-on sentences. It helps to strive for the liberal use of nouns and “action” verbs. When the comfort level is suitable, start the exercise again and attempt to create a storyline following the exhibition content. This is never exact, however. Do not sacrifice tempo and pacing just to search for the “right” word.

Point of View

This exercise is wonderful for bringing diversity into an exhibition storyline. Each participant selects a unique and different character or personality that can somehow (even remotely) be connected to the exhibition content. The participants are going to tell a story from different perspectives. The leader picks the theme and timeframe for the story. Usually telling a story chronologically is easy for museum people to do because so much of collection content is organized that way. The leader should try to pick a theme or story that involves action or conflict of some sort. This can make for a more involving storyline. The participants line up and, one at a time, begin to tell the story from their unique perspective. One participant steps forward and begins the story. At a random cue from the leader, that participant steps back and the next in line steps forward to pick up the story at that point. The point of view will change, however, due to the next participant’s personality. This continues through the line of participants until the story is told. Remember, the participants are telling a story rather than acting it out. They should not have dialogues with other people. The selection of characters or personalities is critical to the success of the storyline. Some characters can be fictitious just to enable conflict, surprise, and creative input. For example, if you were discussing a Van Gogh exhibition and you selected the obvious characters of Vincent, Theo, and Paul Gauguin, you might consider some extraordinary characters. What if someone played Vincent Van Gogh’s fictitious therapist, or one of Paul Gauguin’s island mistresses? What about Michelangelo traveling into the future? Do not be frightened of what might seem inappropriate or absurd. You may be surprised how the exercise can help you think in new ways.



TIPS FOR CREATIVE TEAMS

by Louis Nelson

Louis Nelson's wide-ranging design practice has included the Korean War Veterans Memorial on the Mall in Washington, and exhibits for the California Museum of Science and Industry, the Glass Center, the Coca-Cola Bottling Museum and the Tennessee Aquarium. He serves on the boards of the American Craft Museum and the Cooper-Hewitt National Design Museum. The above article is excerpted from his forthcoming book, How To Get It Right. He can be contacted at: lnany@aol.com.

"Make it beautiful. It's the only chance we have."

My process normally starts during a team creative meeting. Its purpose is to depart from all ordinary expectations of the subject. Literature, information and visual materials have previously been collected and members of the team have had a chance to look them over. I speak very briefly to the subject, but mostly take the staff through exercises that encourage them to freely collaborate and build a creative relationship.

I may ask, "What comes to mind when you think of this subject?" Here starts the building of a non-threatening interaction between team members. This is the time for each of us to freely give of ourselves within certain rules.

Don't judge. Don't edit. Nothing is wrong. Let go of old ideas. Uncertainty is all right. Accept the subject—don't fight it. Make something of it.

"Personality is what we remember."

Lists are built on a large pad of paper—with sketches at times. Assignments are then made based on what has preceded. This session rarely lasts more than one and a half hours.

We're in the concept phase, where everything is valid. Some individuals may require more research. Some may require sketching in various media. Some may require some simple warm-up "creative" exercises that I give, such as *creating five compositions of three curves in space; or close your eyes and describe what you see about this subject. Treat the idea as you yourself would like to be treated.*

In a day or two we all come together again and share our work. The ground rules still apply. During this time and as the project proceeds, I'll start to encourage the following. "Think of the most important part of the subject. Emphasize it. Emphasize it visually, with sound, with touch. What's dominant? subdominant? subordinate? in the theme; visual focus; learning objective; traffic pattern; 3-D form and interactive features. What are you passionate about in this subject? What makes it magic? Make it change before your eyes. Make it grand. Make people feel grand. Entice them. Make them want more."

And when things get complicated—keep it simple. Get back to basics and evolve the idea from there. Move on. Don't get caught in a quagmire of irrelevant details. Look for the single important idea.

"No thing great is created suddenly, any more than a bunch of grapes or a fig. If you tell me that you desire a fig, I answer you that there must be time. Let it first blossom, then bear fruit, then ripen."

—Epictetus

In most cases I encourage the staff to let people find their own way through the exhibit: seek information on their own, within their own interests; seek their level of fascination and knowledge.



• Non-linear. Unbounded. Wander and wonder through the space. Look around and get drawn to what attracts them.
• Let them seek on their own. Give hints along the way, like sign posts. Matrixes are built that start to bring form to the subject and visual ideas.

• Space and time are unique opportunities. They are not a book or a film. Make the most of this "hot" media. Create opportunities to use all the senses—see, touch, hear, smell, taste.

• Continually during concept generation, all the way through contract documents, I tell my staff, and myself the following:

• **1. Make it reach the heart of the people...** make it mean something to people emotionally, physically, psychically, practically. Learn about people and what they need...not what they tell you they need. Understand the clues behind the actions, words and gestures. See into their hearts and guts and minds. Look into yourself. Maybe, read the classics. Hear what the past has brought forward for us to understand today. Make it reach the people.

2. Make it original. Give it its own personality so that no one else (or anything else) can be like it. Look around yourself. Too many things are warmed over ideas with slight modifications. They've lost their personality and now belong to no one. Personality is what we remember, strive for and relate to; desire, want, and smile with. I want people to remember what I design—use it, desire it, laugh with it and possess it. Look at most of today's automobiles, toasters, trains, planes, houses, briefcases, packaged goods, exhibits and just about anything else that's around. We remember the unusual. This risk brings little comfort for many marketing managers who need grounding with known directions. Make it original.

3. Make it beautiful. Make it absolutely desirable and delightful to see, to keep your eyes on it; to touch, to pick up, and to own, to possess; to want it; to hear it; to taste it; and to smell it. Designers are the ones capable of providing this for an object, a subject and a place. How to do it is something else and very much relates to the understanding of abstract relationships between forms and ideas. You don't see much of this today, with the emphasis on technology, human factors and the bottom line. Make it beautiful. It's the only chance we have.

Disability and the Practice of Public History

May 13-14, 1999 Washington, DC

A free interdisciplinary conference for public history & museum professionals, exhibit developers, and activists on integrating ideas about people with disabilities into history content — beyond issues of access.

Presented by the
Smithsonian Institution's National Museum of American History and
the Accessibility Program, in conjunction with
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Pre-registration is required.

For more information and registration, contact Katherine Ott:
FAX 202-633-9290 E-mail ott@nmah.si.edu TTY 202-786-2414



CREATING CREATIVE EXHIBITS

by Jay Rounds

Jay Rounds is Director of the Museum Studies program at the University of Missouri-St. Louis, and has previously served as Executive Director of the Museum of Creativity project and as Chief Curator of the California Museum of Science and Industry. Dr. Rounds can be contacted at: rounds@umsl.edu.

Every exhibit project involves creativity, but some are “more creative” than others. In what sense, though, are some exhibits more creative than others? One sense of this assertion rests in a critical distinction between two very different types of creativity.

Adams (1986) distinguishes between “primary” and “secondary” creativity. Primary creativity is the deeply startling kind of idea that changes things in a fundamental way—that sets the foundations for an entirely new way of understanding the relevant domain. “Our surprise at a creative idea recognizes that the world has turned out differently not just from the way we thought it *would*, but even from the way we thought it *could*” (Boden 1991:31).

Secondary creativity, by contrast, builds on the fundamental ideas set by a preceding act of primary creativity. It works out the implications of the new idea and explores the possibilities the new idea opens up, but it leaves that fundamental idea intact. For those familiar with Thomas Kuhn’s (1970) theory of scientific revolutions, primary creativity is equivalent to Kuhn’s “paradigm shift.” Secondary creativity is equivalent to his periods of “normal science,” during which scientists work out the implications of the new paradigm and use it to reinterpret their domain.

Kuhn argued that most scientists spend all or most of their careers engaged in the secondary creativity of normal science. This was not intended as disparagement; in his view, science necessarily consists of relatively long periods of normal science, only occasionally punctuated by revolutionary paradigm shifts. While such revolutionary scientists as Copernicus, Newton or Einstein may in this sense be “more creative” than others, in the big picture the secondary creativity of normal scientists is equally necessary to the process. Indeed, a field that experienced constant paradigm shifts would be mired in unproductive chaos.

Similarly, in the exhibits field most of us spend our careers in the virtuous pursuit of secondary creativity—in developing exhibits that are more or less new and different from their predecessors, but are nonetheless recognizable as exemplars of a well-understood and widely-accepted paradigm of museum practice. There’s nothing wrong with that! As long as the paradigm is sound, exercising secondary creativity within the established paradigm is the most rational and productive way to work.

The problem, of course, is that we have now come to a crisis of confidence in our traditional paradigm of museology, a growing sense that the old ways are no longer adequate. The recent literature abounds with declarations such as “in these times we seem to have no idea how to put the theory of museums...into practice” (Cutler 1998:62). Stephen Weil says that museums “face a future in which many of them will be called upon to be very different” (1997:12). As society is changing in fundamental ways, so too must museums.

We now need acts of *primary* creativity that can establish a new paradigm, that can generate a new set of fundamentals that enable us once again to work productively and (*secondarily*) creatively in ways clearly consistent with our sense of mission and our social and ethical values. In this paper I draw on theoretical ideas about creativity to suggest a few ways to enhance our pursuit of primary creativity in exhibit development.

Create Yourself

It’s claimed that when Leonardo was asked what he considered his greatest creation, he replied “Leonardo da Vinci.” Highly creative exhibits are most likely to come from highly creative teams—



**"Every tool carries with it the spirit by which it has been created"
—Werner Heisenberg**

teams that think about themselves as organizations in creative ways. They make creativity an explicit value, and they constantly experiment with ways to improve their realization of that value. Creative ferment is evident not just in their products, but also in the ways they organize (and frequently reorganize) themselves to generate those products.

Like creative individuals, creative exhibit teams need a high degree of metacognitive awareness of their own creative process. Runco (this issue) argues that creative thinkers regularly step back to think about how they're thinking, and they develop deliberate strategies for making their thinking more creative. Highly creative teams and organizations develop complex theories about themselves. They spend a lot of time talking about those theories, and about how to put them into action.

This process can benefit from using strategies such as those recommended in the articles in this issue of *Exhibitionist*, and in the many "how-to" books now on the market (Chand, this issue). But don't mistake these strategies for a recipe for instantaneous creative genius. There's no complete design package for a highly creative museum that you can just plug in and turn on. Standardized methods seldom generate surprising results. Pick and choose among the techniques, mixing them together as raw material in designing your exhibit team as a unique organizational process for generating creative thinking. And keep on stirring the pot throughout your project. To paraphrase Tolstoy with wild abandon, "All uncreative museums are uncreative in the same fashion, but every highly creative museum is creative in its own unique fashion."

Cultivate Foolishness

Rationality is essential to our highest achievements, yet rationality can become one of our greatest barriers to primary creativity. James G. March, the leading theorist in the field of organizational decisionmaking, has argued that this paradox arises from the way we define what constitutes

we already have. Rationality works extremely well when we do, in fact, know what we want to accomplish.

But sometimes the problem is not how best to achieve the goals we already have, but rather how to obtain new and better goals. Sometimes we *don't* know what we want to accomplish. In this situation, March argues, our usual notions about rational decisionmaking can become a seductive trap that prevents us from discovering the exciting new possibilities that might revolutionize our field. Because of the assumption of pre-existent goals, rationality is an appropriate technology for secondary creativity, but a massive block to primary creativity.

To return for a moment to Kuhn's depiction of practice in science, we can say that a paradigm works in part by specifying the goals of research in the discipline. Kuhn's "normal science" consists of the exercise of a highly-structured form of rationality in pursuit of those goals. But a paradigm shift—an episode of primary creativity—discards the existing goals, and replaces them with new ones. Kuhn demonstrates that the rational activities of normal science cannot account for the revolutionary conceptualization of a new paradigm. A different form of behavior is at work during these episodes of fundamental change.

Neil Harris says that museums have "entered a period of existential scrutiny, one in which the institution stands in an unprecedented and often troublesome relationship to its previous sense of mission" (1990:51). Our challenge, he argues, is "to reconceive every aspect of museum learning and experience, to admit the need for phenomenological reconstruction" (1990:53). If this is true, then a central aspect of our problem is the discovery of a new set of goals for our practice. Exhibit teams striving for primary creativity must adopt patterns of behavior that break the bonds of existing goals. This may sound easier than it actually is. John Maynard Keynes observed that the real difficulty in changing any enterprise lies not so much in getting new

ideas, as in escaping from the old ones. Discomfited by the confusion and ambiguity that typifies periods of paradigm crisis, our natural response is to seek even greater levels of

rationality—but this locks us precisely into the old goals, the old ideas, from which we need to escape.

—Charles Handy

"We are entering an Age of Unreason...a time for thinking the unlikely and doing the unreasonable"

rational behavior (March 1979). He notes that our models of rationality are based upon the assumption of the "pre-existence of purpose." Thus, rational organizational decisions are those that most effectively achieve the goals



March argues that we need a technology for generation of new goals, to counterbalance our highly-developed technology for rational achievement of existing goals. He describes this as a “technology of foolishness,” a method to “treat action as a way of creating interesting goals at the same time as we treat goals as a way of justifying action” (1979:75). “Individuals and organizations need ways of doing things for which they have no good reason. Not always. Not usually. But sometimes. They need to act before they think” (1979:75).

Playfulness, March suggests, offers one strategy for cultivating foolishness. It is “the deliberate, temporary relaxation of rules in order to explore the possibilities of alternative rules” (1979:77). It is “time out” from the normal strictures of rational behavior, an opportunity for exploration of alternative realities that might become the basis for a new paradigm. He offers five startling prescriptions for helping organizations “to experiment with doing things for which they have no good reason, to be playful with their conception of themselves” (1979:78-79). Space does not allow a full explanation of them here, but I do list them in the hope of sending you running to read the original article:

- treat goals as hypotheses
- treat intuition as real
- treat hypocrisy as a transition
- treat memory as an enemy
- treat experience as a theory.

So as part of your team’s creation of itself as creator of innovative exhibitry, you should develop an explicit technology for the cultivation of foolishness. Of course, a steady diet of foolishness is not likely to put a finished exhibit on the floor. Rationality and foolishness should be understood as two distinctively different, but complementary, forms of behavior. Both are necessary in order to arrive at a final product that is both original and useful, so a highly creative exhibit team must find ways to accommodate the conflicting demands of both.

In a recent museum design project that I directed, we addressed this problem by announcing that we would have two distinctive modes of operation. One was the “Bureau of Rational Behavior,” and the other was the “Ministry of Silly

Ideas.” At any given moment, team members were expected to behave differently depending on whether we were working in the Bureau or in the Ministry. My declaration that we were now operating as the Ministry of Silly Ideas chartered staff to engage in foolishness, without having to fear being judged by the standards of rationality. At the same time, knowledge that we would soon be returning to the Bureau of Rational Behavior alleviated fears that if we kept on behaving like this, we would never get anything done.

The time we spent in the Ministry did turn out to generate many of the ideas that became central to our designs, and did lead to discovery of new goals for the museum. During those sessions we used a variety of creativity techniques to generate wild visions of what a museum *might* be like if we didn’t already know what a museum *should* be like. We deliberately parodied the work we had just been doing in the Bureau of Rational Behavior, and generated vast numbers of silly ideas that had no particular relationship to the goals with which we had started.

But the playfulness of work in the Ministry mode did not come easily to the team. It was so different from normal modes of work that it had to be learned. In the early sessions, senior staff had to model extreme foolishness (for which, fortunately, we had a natural penchant) before other members of the team could develop the confidence to relax their own need to conform with the traditional organizational virtues of rational behavior. They had to become convinced that they were not only permitted, but expected, to act like completely different people in the Bureau and in the Ministry. That’s why the clear demarcation between the two modes of operation was so essential.

Don’t Drive Your Mule Straight to Loretto

In *The Life and Opinions of Tristram Shandy* (first published in 1759)—a novel famous for flouting the conventions of logical narrative—Shandy tells us the proper way to take a journey or to tell a story:

Could a historiographer drive on his history, as a muleteer drives on his mule,—straight forward;—for instance, from Rome all the way to Loretto, without ever once turning his head aside either to the right hand or to the left,—he might venture to foretell you to an hour when he should get to his journey’s end;—but the thing is, morally speaking, impossible: For, if he is a man of the least spirit he will have fifty deviations from a straight line to make with this or that party as he goes along, which he can no ways avoid. He will have views and prospects to himself, perpetually soliciting his eye, which he can no more help standing still to look at than he can fly; he will moreover have various



Accounts to reconcile:
Anecdotes to pick up:
Inscriptions to make out:
Stories to weave in:
Traditions to sift:
Personages to call upon:
Panegyrics to paste up at this door;
Pasquinades at that:

—all of which both the man and his mule are quite exempt from. (Sterne 1967:64-65).

Our concepts of good organization, efficiency and rational management in exhibit development often lead us to drive our mules straight to Loretto, looking neither to the right hand nor to the left. At the end of the journey we find that the Museum of Loretto has many virtuous, coherent and tightly-organized exhibits—but no primary creativity, for the

ideas that lead to fundamental innovations are found not on the main road, but in those “fifty deviations from a straight line.”

Many exhibits might themselves benefit from a more “Shandean” quality in the visitor experience (i.e., more opportunities for visitors to step off the main storyline), but here my concern is with following the Shandean path in our processes for *developing* exhibits. Of the countless forms of possible deviation from the straight path, in the following section I focus on a single one.

Alternate Viewpoints

Every exhibit project raises the problem of relationships between the parts and the whole, between the individual exhibit elements and the total experience. In the design process you can't see both the trees and the forest at the same time, but you know that the trees have to come out

THREE GOOD REASONS *NOT* TO BE CREATIVE

“Creative” is a word with very positive associations for almost all of us in the museum profession, so we tend to assume that seeking a higher degree of creativity is necessarily a good thing for every museum. But pursuit of high creativity is a strategic choice, and it may not be the best choice for every museum. Here are three good reasons why the leadership of a museum might legitimately decide to avoid the strategy of high creativity.

1. Creativity is risky

Creativity involves a substantial risk of failure. Most new ideas turn out to be bad ideas. Even Mozart composed duds about two-thirds of the time. But in the beginning there's no reliable way to tell a good idea from a bad one. You have to make a sufficient investment in development of an idea to find out, and if the answer turns out to be “bad idea” (and it usually does), that investment is largely lost. So unless you're very lucky, to sustain a high-creativity strategy you have to be in a position to survive some expensive failures. Even when your new idea does turn out to be a winner, it usually takes a long time to realize the benefits. The messy process of developing a highly-creative exhibit eats up scarce resources in the present, in the hope of payoffs to arrive some years in the future. An imitative exhibit can usually be produced much faster, and at lower initial cost. In a given museum, the financial or political situation may make this long wait for payoff untenable.

2. It's safer to be a “free rider”

Certain types of marketplace situations make the high-creativity strategy very desirable. These are “winner-take-all” markets, in which the winner (the organization with the best idea, or the first to reach the market with a given idea) scoops up virtually all the rewards. Coming in second isn't much better than coming in last. But the museum field isn't much like that. For the most part, museums enjoy a local monopoly in their specific type or particular collections (or at least a very small field of competitors), and (except for the tourist trade) they don't lose business as a result of looking pretty much like their counterparts in other cities. So you can afford to steal ideas (or, rather, “adopt the best practices”) from museums elsewhere, after they've proven successful, letting the other institutions bear the costs and risks of innovation. The imitated ideas will still be fresh in your own locality. This is the “free rider” strategy, and under most circumstances it works well in this type of marketplace—especially for smaller museums with limited resources. Of course, the field as a whole would suffer if every museum adopted this strategy and no one innovated.

3. Highly-creative organizations aren't always comfortable ones

Creativity arises in the clash of oppositions, and highly creative organizations are often marked by tension, conflict and difficult personalities. Sometimes high creativity emerges from a “happy family” environment, but more often there's a lot of stress and infighting that reflects divergent visions. When it works, the payoff can be tremendous—but you've got to have the stomach for an often-contentious process. If you value harmony in the workplace over unique accomplishments, then the high-creativity strategy may not be right for your museum.



constituting a forest—that is, a coherent exhibit that is something more than merely a bounded area within which there are a lot of unrelated elements. It all has to add up to something.

Common wisdom on exhibit development (and most formal schemes for orderly project management) tell us that the way to achieve coherence of parts and whole is to work deductively from the whole to the parts—to start with defining the most global goals or messages of the exhibit, and then to work through a series of steps defining progressively more specific realizations of those goals, concluding with the actual exhibit elements that carry their assigned fragments of the whole. Work from *why* to *what*. First a Statement of Purpose, then Goals, then Objectives, then Key Messages, and so on down the line. Each step disciplines the next, to ensure that you don't drift away from the original vision of the whole. "If you don't know where you're going, you'll end up somewhere else." First determine that you're going to Loretto, then drive your mule down the straightest road to your destination.

If you do in fact know exactly where you're going, this seems like pretty good advice—and when you have a strong paradigm for practice, you *do* know where you're going. Tremendous secondary creativity can be exercised within such a whole-to-parts process. But if our times call for *primary* creativity in exhibit development, we must start from the premise that we *don't* know exactly where we're going, that in fact our most fundamental challenge is to discover new and better places to go that have previously been unexplored. If this is our situation, then the standard deductive process for working from whole to parts is a trap that blocks our hopes of success. It forces us to confine our thinking to the goals we already have.

The solution to this problem is not to reverse the standard wisdom—to now work inductively in a straight line from parts to whole. Some individual creative geniuses can work this way, but within a complex interdisciplinary team coherence rarely emerges from such a procedure. It usually produces atomistic trivia, however attractive or engaging the individual trivial elements might be. Rather, primary creativity emerges most powerfully from a continuous alternation, over the course of the design project, between focusing on the whole and focusing on the parts—from jumping back and forth between the forest and the trees, between *why* and *what*. In this strategy we start with only the most loose and tentative definition of the forest. Then we leap quickly into design of individual trees, and then quickly leap back to further discussion of the nature of the forest. And back again.

This alternation reflects March's distinction between rationality and playfulness. The whole-to-parts, deductive strategy is highly rational. It assumes "the pre-existence of purpose"—that we already know our goals. A focus on individual parts, by contrast, can accommodate playfulness, "acting before you think." When focusing solely on an individual element, we can design something simply because it feels good, without being able to provide an *a priori* justification for why it makes sense. We can play with the subject, to discover potentialities within it that were not visible at first.

"If you want people to build a ship don't give them a blueprint, hammers and nails, but kindle their yearning for the wide and open sea"

—Antoine de Saint-Exupéry

As March argues, this "foolishness" increases our likelihood of discovering goals we didn't already have. This discovery comes when we flip back to looking at the whole, and try to come up with an explanation for what would justify a whole that contains such strange and wonderful parts as we have just so playfully imagined. When we then flip back again to the parts, this emerging sense of possibilities for the whole frames the play of our imagination, without prematurely constraining it to a single set of possible goals.

Over time, this frequent alternation between trees and forest results in a coherent whole, but one we could not have imagined at the beginning of the process. Success in this strategy demands that the project manager develop a fine sensitivity to the team's process, recognizing when rationality needs to be leavened with playfulness, and when the free play of imagination needs to be disciplined by thoughtful, holistic rationality. No formula can tell you how to make that judgment, since it requires a deep understanding of the unique dynamics of your team. But one strategy that I have found effective for many teams is the rule of frustration: push the team in one mode as far as they can go until they start to show signs of frustration, of running dry; then flip to the opposite mode, and push from that perspective.

Don't Shrink from Conflict

Creativity seems to be generated in conflict, in the clash of opposing principles. Simonton (1994:334) found that creativity tends to reach its peaks in a given society after wars or other massive social dislocations force together people with radically different points of view. March (1994) shows that organizational creativity is driven by the clash of irreconcilable processes of "efficiency" and "adaptiveness." This pattern holds true even at the level of individual



"The act of creativity begins in an act of destruction"

—Pablo Picasso

psychology, where the conflicting principles of the conscious and unconscious mind collide to generate creative thinking (Feldman, Csikszentmihalyi and Gardner 1994). Csikszentmihalyi (1996:57) argues that the "creative personality" is marked most distinctively by its ability to encompass "contradictory extremes" within itself.

Interdisciplinary exhibit teams are often hotbeds of conflict. Unfortunately, many prescriptions for managing exhibit teams focus on how to eliminate this conflict. There is, of course, such a thing as unproductive conflict, but in pursuing high creativity we need to recognize that conflict among disciplinary viewpoints may be a central dynamic for generating creative ideas. Eliminating all conflict within a team may be a prescription for eliminating creativity, for settling for nothing but the uncontroversial, obvious solution.

Leaders of creative exhibit teams must overcome the natural tendency to feel as if they're failing if their team members are fighting with one another—so long, of course, as they're fighting over the right things. Fighting over ideas may be a sign of a healthy creative process, while fighting about personalities almost never is. Here again the team's explicit, metacognitive awareness of its own creative process is the key. Teams should state explicit rules for "fair fighting." These rules should acknowledge that it's okay to have rousing arguments over the substance of the exhibit, while maintaining a clear separation between the ideas themselves and the members who are championing them. It should be clear how decisions will be made, and that the ideas themselves, rather than the people, will be the winners or losers. The team leader must make it clear that adherence to the rules of fair fighting is a requirement for every member of the team.

It may feel uncomfortably Machiavellian for an exhibit team leader to think of "managing conflict" within the team. But conflict is a part of the reality of the creative process, and any exhibit team that is to achieve high creativity must learn how to use conflict productively. This rarely happens without the intervention of a leader who has the stomach to deal with the inevitable tensions and messiness.

None of these prescriptions is easy to implement. Creativity is hard, and primary creativity is *really* hard. Aiming at high creativity places enormous demands on project leaders, exhibit teams, and their museums. But the rewards for success are also great, and those exhibit teams who make primary breakthroughs now have the opportunity to revolutionize the entire field. They will benefit us all.

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by Willard Whitson
Technical Editor

technically speaking...

Technically speaking, this section of the *Exhibitionist* is, and will be, dedicated to the technical aspects of exhibits. That is not to say, however, that it will be only concerned with the mundane nuts and bolts side of the business. I will endeavor to keep technical interests and issues where they belong—in service of our educational missions. I thought about calling this section: “tools in the toolbox,” a phrase I use when referring to new technologies for exhibits. Often in conversation with vendors, museum administrators, marketing specialists or reporters, I am asked if an exhibit will be state of the art, up to date, cutting edge or whatever the current parlance is for current. I usually reply with something about “not using technology for its own sake”; or “we can’t afford to chase the leading edge of technology”; or “we use the most appropriate ‘tool in the toolbox’ for the story we are trying to tell, being mindful of physical, budgetary and staffing constraints.”

“You can’t separate technology from mission.”

The point is that you can’t separate technology from mission. We tell stories with our exhibits, and we choose the medium and tools that best help us to tell those stories. Technological growth is an accretive process. New technologies do not necessarily replace old. We may have interactive multimedia and programmable joy sticks, but we also continue to make dioramas, create “Pepper’s ghost boxes”, put objects with simple labels in cases and even provide real live humans on the floor. In short, I can justify just about any topic for inclusion in this section! Rest assured, we will have articles that address basic issues, such as how to you select types of glass for your exhibit case, or what light bulb lights your fire, but I am going to attempt to keep these articles mindful of broader issues. I hope that you will find “Technically speaking” informative, provocative and at least amusing—maybe even useful. I also hope that you will contact me with interesting ideas for articles that satisfy our need to know “how they did that,” while challenging our assumptions about “why they did that”—technically speaking, of course.



MAINE'S EXPLORE FLOOR:

Creating Immersive Environments for
Informal Science Learning

by Melissa Kim Phillips

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consultant who served as science
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Who wouldn't love to peek inside a bear's den, or descend to the ocean floor in a submarine to see lobsters? Now visitors to Portland can explore the Maine woods and oceans right downtown at the Children's Museum of Maine. The museum opened its completely renovated Explore Floor in November 1998, offering the public 3,500 square feet of new hands-on activities and interactive exhibits devoted to science and natural history in Maine. Influential decisions early in the development and design of the Explore Floor led to the creation of immersive environments, making visitors feel they have entered an underwater world or the middle of the Maine woods.

Choosing Immersive Environments

Through surveys, feedback, and various outreach methods, the museum staff had learned of the public's desire for more science exhibits at the museum, and had identified a need for more informal science learning opportunities in the community. Board members and staff at the museum established a task force of educators, parents, scientists, and museum professionals to advise in the research and development of these exhibits.

Four objectives were soon established for the exhibit as a whole:

- to show visitors that science is at work all around us in Maine;
- to stimulate visitors' curiosity and excitement about science;
- to demonstrate that science involves critical thinking, informed decision making, and problem solving;
- to make science more familiar and accessible to all visitors.

These objectives helped drive and define the exhibit development process, and having them set early in the process proved useful. In later stages, trying to decide on certain elements, the objectives could always be used as a test. Would a video of a whale watch fit any of the objectives or would a more open-ended whale poetry activity be more stimulating?

In presenting science topics, the staff also felt strongly that the majority of museum visitors would express some fear and trepidation about science. Science, like math, has an undeserved bad reputation. Making the exhibits fun, familiar, friendly, and accessible seemed vital. Everyone agreed that visitors should feel a sense of place when they entered, and should come away with the impression that science is not scary, but rather that many things we do in our daily lives constitute scientific inquiry.

These concerns led Exhibitions Director Brewster Butfield to conclude that immersive environments were the best way to introduce science and nature to children. By choosing familiar Maine environments, children and adults would be more comfortable with new topics introduced within those spaces.

After considering many smaller environments—a lighthouse, a lobster boat, a river raft, a ski slope—the exhibit development team decided that two larger areas offered more potential for immersive qualities and chose to create an underwater environment and a Maine woods area. In addition, large iconic pieces were created within the environments to provide young children with immediate points of reference.



Immersive environments were defined as settings that stimulate and activate visitors' imagination and allow for creative open-ended play. These settings were created with the help of audio, visual, and tactile cues. The emphasis was not on creating a total, biosphere-like environment, but rather on supplying enough environmental cues and providing plenty of both closed and open-ended activities. How many cues do you need, or how do you determine if your environment is truly immersive? It's difficult to quantify. If children are stimulated and engaged enough, then active, open-ended play will occur. This if-then equation served as a continual benchmark for the development process. As a giant oak tree took shape in the woods area, it became clear that its interior needed more cues. Sounds of woodpeckers, owls, and squirrels were added, along with forest animal dress-up costumes.

As science topics were suggested and considered, the museum made another important decision: to involve consultants outside the museum profession for a fresh outlook. Early education specialists, children's writers, theater set designers, painters, graphic designers, and computer software designers all contributed to the exhibit development process.

In the Maine Woods

The focal point for the Maine woods is a floor-to-ceiling mountain. On one face, a climbing wall gives visitors a chance to test their motor skills, assess risks, and stimulate their decision-making abilities. Rock climbers from a local

climbing gym created age-appropriate routes for the hand and foot holds. Three horizontal routes are marked by three different minerals, encouraging children to traverse the mountain, but there are no right or wrong ways to climb.

In a cave in the back of the mountain, bear tracks on the floor lead you to a lifelike, four-foot-long black bear curled up in the corner. By pushing different buttons, visitors can hear three different bear heartbeats: dormant, normal, and active. A wildlife biologist who studies black bears in Maine is profiled, via large photos and bubble captions, on a poster hanging in the cave.

A flowing stream tumbles down the back of the mountain into a figure-eight shaped stream table. The stream table had originally been envisioned as a molded fiberglass bed, but after looking at other pools, spas, and outdoor water features, the museum hired a Maine contractor who makes garden ponds, gazebos, and spas using local rocks and stones. The use of these stones gives the stream a natural, outdoorsy look and greatly adds to the immersive quality of the area.

In the stream itself, activities like dam building, and floating and racing different types of boats, encourage open-ended play. Audio cues, including forest sounds and bird calls, play from a tape player in the ceiling. A mural along the wall continues the stream and forest motif, extending and expanding the space.

An oversized Oak Tree, at the outer edge of the Maine woods area, is another major icon for the whole floor. Artists and theater set designers worked to create the sculpted and painted exterior, branches, and interior lighting. Inside the tree, children can climb to an upper level, try on animal costumes, listen to and create sounds of forest birds and mammals, and study tree rings. Outside, they can trigger more animal sounds and use a tape measure to measure the circumference of the tree.

The creation of the Oak Tree serves as an example of how the exhibit team made a small physical space seem much larger. Several climbing levels inside the tree make the interior feel larger; tree branches were painted on the ceiling as extensions of the sculpted branches; and as a result the tree seems to grow through the whole museum.

In an Underwater World

Patterns of colors in the flooring tiles lead visitors from the woods to the underwater area, which is framed by two large icons: a humpback whale and a yellow submarine. In this area, the immersive environment was created by using all possible surfaces. The floor area is delineated by a dark carpet. The walls are painted a gradated blue. The ceiling tiles are light blue with white shadows of fish. Nets with fish





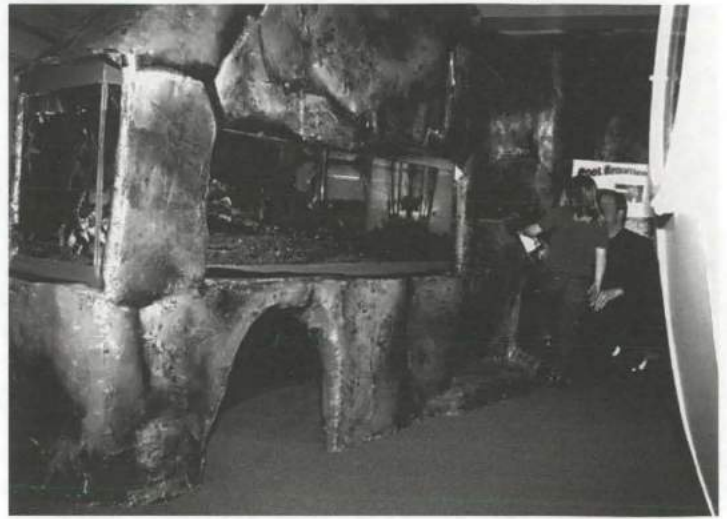
inside hang from the ceiling, and the underside of a small motor boat adds to the feeling that you are looking up at the ocean's surface. Plastic jellyfish, lit by rotating fiber optic cables, glow on and off just under the surface of the water. Audio cues abound: humpback whale songs play in the whale's mouth; gurgling bubbly sounds play in the center of the area; and motor engines thrum from the submarine.

In the center, floor-to-ceiling rock sculptures make use of the same principle as the oak tree, making a small area seem larger by using vertical space. Embedded in this textured rock is a 150-gallon saltwater aquarium, with marine organisms from the Gulf of Maine. The rocky reef extends to a side wall, and children can tunnel underneath and through it. Cavities in the reef provide space for exhibits, including a tank with a hydrophone to make underwater noises, a diving cormorant and a stopwatch to time its breath-holding abilities, and a photo-story profile of a Maine scientist who studies plankton.

Visitors can enter the bright yellow submarine from two entrances or look in through its portholes. A children's science writer teamed with a marine ecologist to develop the storyline for the submarine interior, to theme all the hands-on activities around actual research in the Gulf of Maine. Children can operate a CD-ROM video program, which uses footage taken from a research submarine in the Gulf of Maine, to find and identify marine creatures. They can operate a remote controlled camera, located inside the saltwater aquarium outside the sub, to view the tank's inhabitants on a monitor. There is also a robotic arm for picking up and measuring lobsters, a periscope to see Casco Bay, and an upper level with radar screens, marine charts, and an intercom.



The front end of a life-size humpback whale frames the other side of the underwater area. The whale undergoes a transition from a two-dimensional body painted on the wall



into a three-dimensional mouth. Visitors can walk inside, look at whale baleen, hear whale songs, view whale food, and make whale poetry with magnetic words.

The Explore Floor opened to the public in November 1998, and the immediate response has been overwhelmingly positive. Visitors are stimulated by the immersive environments and feel comfortable with the settings and exhibits within them. The future holds comprehensive evaluation as well as continual updates and additions to the immersive environments to maintain and enhance the feeling of immersion in an exciting, stimulating place.

The Explore Floor was sponsored entirely by local funding sources, at a total cost of \$250,000. The UNUM Charitable Foundation provided a challenge grant that was matched by Peoples Bank, Fairchild Semiconductor, Bell Atlantic Corporation, and two foundations, Davis Family and Libra.

For more information, contact Brewster Buttfield, Exhibitions Director, Children's Museum of Maine, 142 Free Street, Portland, Maine 04101 (e-mail: brewster@neis.net).

reviews



The Museum of Nothing and Everything

by Eric Sandweiss

City Museum

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"Cold Beer! Smoking allowed."

Those unfashionably welcoming words greet visitors to Beatnik Bob's Café, a shadowy but comfortable joint that sits beside the railroad tracks. On the nearby train platform, a distinctly young-looking crowd lines up anxiously for the next train that will take them in careening circles through the countryside and drop them back where they started. On the wall around the corner, a signed print of R. Crumb's brilliant "Short History of America" hangs by itself, without label or explanation, as if someone had found a nail sticking out and looked for a picture to cover it with. Welcome to City Museum.

Museum?

St. Louisans don't seem at all troubled by the term, at least not enough to keep from showing up in remarkable numbers—300,000, at six dollars a head (children under the age of one are free, bless their hearts), in the first year alone. Neither should anyone else let it hold them back—not if they have a reasonably open mind, a taste for fun, and a curiosity to see what could be the freshest, most exciting museum now operating in the United States.

By the time a City Museum visitor peers through the threshold of Beatnik Bob's, in any case, he should be ready for anything from this unpredictable place. After all, he's already eyed a reconstructed 19th-century farmhouse in the parking lot, purchased his ticket through a window in the dismantled facade of a well-loved downtown office building, watched children disappearing into the jaws of a 50-foot concrete whale, climbed a staircase that once led to the old City Hospital, watched a 12-ton granite block being raised and lowered by the world's largest windmill engine, and learned how to make shoelaces.

Presiding lightly over this mayhem are a team of creative, energetic artists, builders, craftspeople, and otherwise uncategorizable misfits headed by the husband-wife team of Gail and Bob Cassilly. It was the Cassillys who, in 1993, purchased the landmark International Shoe Company building on Washington Avenue—in the city's garment district—and its adjacent, 600,000-square-foot warehouse.

St. Louisans were already somewhat familiar with Bob's career as an architectural salvager (exacting but steady work in this demolition-friendly city), and as the creator of some fanciful environmental sculpture scattered around the region. The purchase and rehabilitation of the International Shoe complex seemed a bid for respectability—a shrewd real estate move at a time when this downtown-fringe neighborhood was well-poised for a comeback.

But if the Cassillys proved to be smart, they soon laid to rest any fears that they might also have gone straight. Instead, what they revealed to curious St. Louisans when they

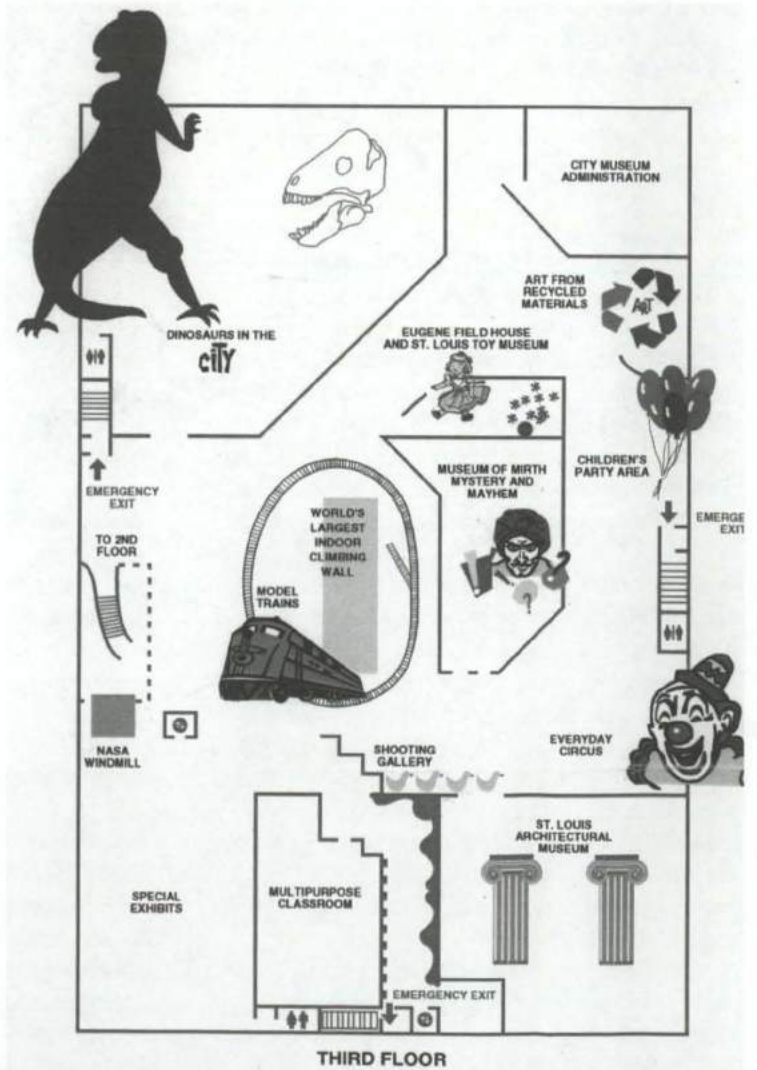
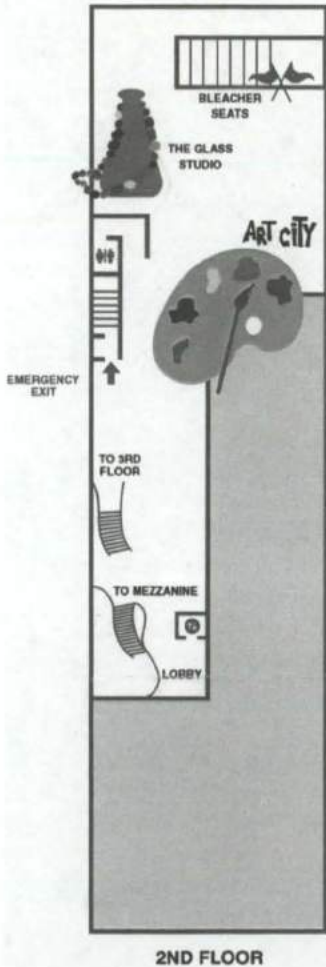
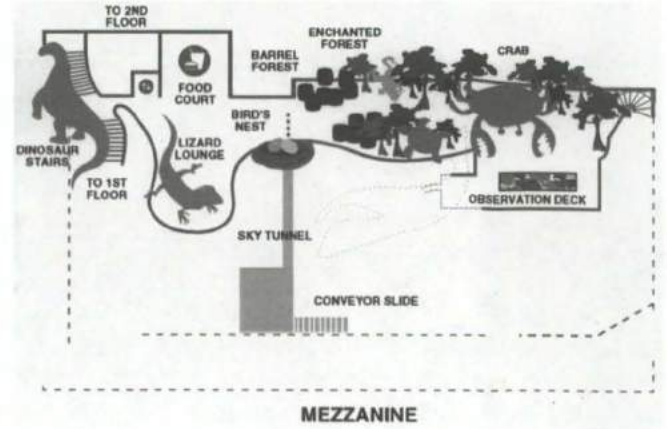
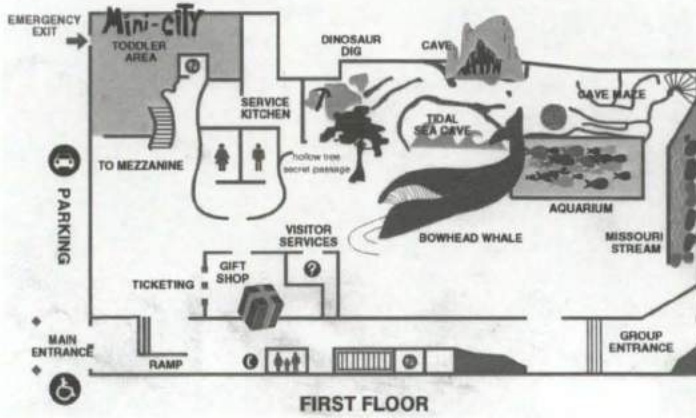


opened City Museum's doors in October 1997 was a psychotic funhouse of industrial proportions. Concrete slab floors, where they seemed to be in the way, had been cut clean through; massive elements from demolished local buildings had been resurrected; one whole floor had been transformed with enough caves, ropes, hollow trees, and tunnels to lose a whole classroom-full of school children; a third-floor wall was adorned by what were quite plausibly described as the world's largest pair of underpants.

The common element to this startling menagerie is its re-assembly of once-familiar fragments of our industrial-commercial culture into a new and sometimes unrecognizable context. "Bob's always had a close relationship with junk," Gail explains matter-of-factly in the video that documents the making of the museum. Her husband himself offers that, "If you can buy it in a store, we don't want it." Cast-off materials make up not only the subject of many of the museum's displays—such as the St. Louis Architectural Museum, a trove of building fragments—but also the structure of the museum itself.



reviews



reviews



Titanium debris from the factory floor at McDonnell-Douglas adorns the columns of the Lizard Lounge; the staircase banister is crafted from dozens of conveyor-belt rollers; the first-floor restrooms are walled with stacked rows of metal steam-table warming trays. Inlaid mosaics across the walls and floors turn bits and pieces of broken objects into a tropical fantasy of lizards, fish, and jungle flora.

City Museum is one museum and many museums; it is a museum of nothing in particular and everything in general. It orders the world through chaos, and it edifies through silliness. Its exhibitions seldom add up to a single clear "take-home message"; its interpretive labels—often typed pages taped to the wall—are grammatically erratic. The very idea of calling this experience a "museum" comes, on second or third visit, to seem a splendid joke. This is a museum of museums, a display of displays, the kind of place that bored children might fantasize about on their class field trip to the art museum. If some of the temporary exhibitions make a good bid for imparting serious historical content—like the "Sullivan in the City" exhibition now on display—there are just as many whose sole avowed purpose is as serious as getting us to understand the history of the corndog in American culture. At a time when long-assumed notions about museum learning are under deserved question, City Museum manages to shake up familiar formulas and send them cascading in a delightful mess, back down to the ground.

There is a resonance to this place that St. Louisans have recognized; an attraction that goes beyond its accumulation of funny things to read and fun things to do. Just as the

"museum" title makes an aptly subversive appeal to people's desires to overturn the pious authority of our museums, so too does the "city" in City Museum's name provide a key to its success. St. Louisans, like all Americans (o.k., more so), have been thrown for a loop by the irreversible transformation of their once-familiar urban landscape. As a majority-suburban nation we share a simultaneous loathing and desire for the city neighborhoods from which our parents and grandparents fled, and through which today we run just as quickly, searching for the right highway offramp, or the stadium parking garage, or the lot to which our car has been towed. City Museum offers St. Louisans a chance to come back to the heart of their city—not into the preplanned environments of the festival marketplace, the sports stadium, or the office tower, but into a historically messy and unpredictable place. Once inside, they witness a density of sight, sound, and experience that can only be described as "urban"—and that is not, distinctly, "urbane."

Here is one preserve—safe, accessible, and fun—where the palimpsest of the urban landscape is still tangible.

It is, of course, sad that our cities themselves so rarely offer such a rich experience of discovery. Places like City Museum will substitute for that experience, I suspect, for many visitors. On the other hand, unlike such literal recreations of the urban landscape as one finds in Los Angeles's Universal CityWalk or Las Vegas's casino-sized Manhattan, City Museum may through its sheer energy empower some visitors to seek out, and to celebrate, the accidental, the felicitous, and the gloriously ordinary places whose disappearance we so passively watch. The trick for

this particular museum will be to stay fresh, to continuously reinvent itself in such a way that the jokes don't get old and the surprise doesn't become mundane. In the meantime, it has opened our eyes to what both the city, and the museum, can add to our lives.

Eric Sandweiss is an urban historian who has served as Director of Research at the Missouri Historical Society since 1992. He can be contacted at sesandu@jinx.umsl.edu.





forum

The Case For Cultural Attractions: A Design Perspective

Difficult as it may be to understand today, as recently as forty years ago museums were perceived solely as scholarly repositories dedicated to the collection, curation and preservation of evidence defining the history of natural and human experience. From time to time, public exhibitions, organized primarily by the museum's curatorial staff utilized this artifactual evidence to explain one or another aspect of the history it represented.

For my own part, from the outset of my exposure to these institutions, I viewed the museum as *theater*, scripted from the complex patterns of human history, annotated by authentic collections and played out on a dramatic stage infused with leading-edge presentation media. It seemed obvious to me: create a coherent storyline, involve the visitor, make the experience pleasurable and the significance of the presentation, the museum and its mission will emerge. Obvious perhaps, in light of what we know today about interpretation, but in its time a heretical view not shared by the vast majority of museum professionals. All of this is not to say that the research, curatorial and archival programs on which the museum is founded should be abandoned. Indeed it is these very occupations that continue to distinguish the museum from both academic and entertainment facilities and preserve the museum as a unique institution.

Clearly however, developments throughout the last quarter of the century in the areas of communications, entertainment technology and institutional funding forced the museum to review its priorities and redefine its position with respect to public participation.

Much as I would like to believe that my persistence in bringing my vision into focus on those occasions where circumstances were favorable was a major factor in the now well documented shift in the museums' exhibition philosophy, it was the far more compelling mandate to increase the ratio of earned income required to compensate for an unanticipated and certainly unwelcome decline in private and public subsidy that drove the museum to attract visitors in substantially greater numbers.

To that end, the museum was forced to explore a variety of innovative measures that would increase attendance and create additional revenue sources. Thus was the era of interactive and participatory devices, special format films, "blockbuster" traveling exhibitions, large gift shops and

cafes and intense marketing introduced into the traditional environs of the museum. Led by Science Centers, which traced their heritage of "hands-on" opportunities to the second quarter of the century, natural and cultural history museums, visitor centers and other interpretive facilities began to follow suit.

Throughout the nineteen eighties, the style and substance of the museum experience became more technologically sophisticated, incorporating media, materials and special effects pioneered in film, television, theme parks and world expositions. To a large extent there seemed to be a fulfillment of the promise for the museum to become the recreational institution for which it had always been ideally suited.

That measure of success notwithstanding, it has become painfully clear in the last few years that no matter the incorporation of cutting-edge technology, large format films and even larger museum shops, there is a limit to how much time and how many dollars the public is willing to commit to museum venues. As a consequence, the museums still find themselves unable to compete successfully for attention with the better financed, more powerful themed attractions and big budget feature films that have become standard fare in public entertainment. Without the volume of traffic and revenue sufficient to support their traditional mission as preservers of the past and interpreters of the future, the museum finds itself once again seeking new solutions to an old problem.

Where then do they go from here? To use an old and tired cliché, if you can't lick 'em, join 'em.

Look at the qualities and characteristics of venues that draw the public in large numbers. Respond quickly to the changing nature of public tastes and priorities. Think of the museum as a business rather than a charitable institution. Embrace, rather than compete with the entertainment and retail industries.

In my view, the future horizon is fraught with opportunity to reach out to the leisure minded public with a form of recreation that meets its expectations for entertainment, themed dining and shopping while providing an educationally rewarding experience that stimulates their curiosity and expands their minds. It is this format that I define as a Cultural Attraction.....informationally driven, exciting and dynamic, incorporating a balanced menu of retail, food and entertainment venues that together make the undertaking economically viable.



It remains for the museum to take a leadership role in implementing this strategy before it is adopted by the development community.

Barry Howard *has designed and/or master planned more than 20 museums, including the California State Railroad Museum, the Powerhouse Museum and the Hollywood Entertainment Museum. He has also designed dozens of world's fair pavilions and themed cultural attractions. He can be contacted at barryhoward@earthlink.net*

LETTERS TO THE EDITOR

Choosing the Holocaust Museum Architect

In Jane Bedno's review of Edward T. Linenthal's book *Preserving Memory: The Struggle to Create America's Holocaust Museum* (*Exhibitionist*, winter 1997) she notes that [the museum planners had] "by a combination of great intelligence and, considering their lack of prior experience, great serendipity, chosen James Ingo Freed as their architect."

Professor Linenthal eloquently points out in his book that the selection of James Ingo Freed was, at that time, a very courageous effort on my part. As founding Director of the Holocaust Museum (1986-88) I had primary responsibility for the engagement of Mr. Freed. While I agree with Ms. Bedno that it demonstrated great intelligence, I disagree that this effort reflected "lack of prior experience" or "great serendipity."

Prior to my role at the Holocaust Museum, I had served, from 1968 to 1986, first as Vice Director, then Vice President of the Metropolitan Museum of Art, where I directed the comprehensive architectural plan that has had a seminal effect on all museum and cultural facilities design. My selection of Mr. Freed, therefore, reflected considerable prior experience and was not serendipitous.

Professor Linenthal's book is an excellent effort and certainly the most accurate record of the Holocaust Museum's creation.

Arthur Rosenblatt FAIA, *Principal,*
RKK&G Museum and Cultural Facilities Consultants Inc.

CALL FOR ARTICLES:

WHAT'S A MEANING-MAKING EXHIBIT?

Exhibitionist is eager to receive manuscript submissions on all aspects of museum exhibit work. On the back cover of this issue you'll find new instructions on how to submit a manuscript. Feel free to contact me if you want to talk over an idea first, before writing it up.

We're particularly soliciting manuscripts relating to the special theme section for the Autumn 1999 issue: *What's a Meaning-Making Exhibit?* Over the past few years museums have frequently been described as "meaning-making environments," and meaning-making has been touted as a new paradigm for the exhibit experience. These theoretical declarations have attracted a tremendous amount of interest, but it's not yet very clear how they translate into practice. When you sit down to design a meaning-making exhibit, what, exactly, are you doing differently from the way we formerly designed exhibits? This upcoming issue will seek to clarify the meaning of meaning-making, and to offer some practical prescriptions for using the concept in exhibit-making.

The deadline for submissions is July 15, 1999. If you're planning a piece for this special theme section, please contact me as soon as possible to let me know what you've got in mind. My addresses are on the back cover. Thanks!

Jay Rounds
Editor-in-Chief



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