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In Search of Relevance: The Museum of the Twenty-first Century

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Natural History Museums are among the most beloved of our cultural institutions. They help preserve our heritage, explain our traditions and inspire our dreams and hopes for the future. But the future of museums, under threat from a number of outside forces, is in doubt.

Relevance is a broad term when it comes to cultural institutions. Museums, like all cultural institutions, are both products and creators of their cultures. A museum today is more than a repository for artifacts — it must hold meaning and resonate with the issues that matter to ordinary people. By far the most difficult task a museum has is to define its place and its role in the complex changing nature of contemporary culture.

Even though museums are a relatively recent cultural development, they have served to capture and communicate the intrinsic wonders of the natural world. Natural history museums have, over time, procured an edited collection of objects from the natural world and made them available to the community.

As our species progressively becomes physically and emotionally removed from the day-to-day contact with what we refer to as nature, this role has taken on added importance. The natural world is under increasing threat from humans and it is incumbent on institutions to make a stronger commitment to the future.

Future shock

In order to talk about the museum of the twenty first century, one must consider possible developments in the coming decades. Predictions of the future are risky, but some relatively safe assumptions gathered from a number of diverse sources help to illustrate some mega-trends:

> By 2025, when today's kindergartners have kindergartners of their own, the U.S Population is expected to grow 25% to 350 Million, an increase of 70 million people.

Overcrowding, loss of natural spaces and resources, and intense competition for decreasing wealth will contribute to global debates about planning and management of human cultures.

This population growth will combine with increasing diversity to create an ever-growing list of market segments. By 2025, by far the biggest segment of the population will be over 65. The number of seniors will double, to 70 million, and they will define themselves not by their age but by their activities, values and interests. Echo-boomers, the children of the post war generation, will be almost as large a segment of the population. Seniors and young adults will dominate the marketplace and the cultural landscape for the next several decades even as they continue to age.

Our future as a species will depend in large part on the future of scientific knowledge and our ability to assimilate that knowledge into the cultural gestalt.

The biological and cultural diversity of the planet is being lost faster than it is being described. According to Stanford professor Paul Ehrlich, the inquiry into biodiversity must extend also to population and ecological diversity. This seems a real possibility with science becoming more interdisciplinary. Cross-over fields of study are becoming the norm rather than the exception. There are several emerging examples of inter-disciplinary sciences that merge formerly separate fields of study in physics, chemistry, biology, anthropology, psychology, sociology and medicine. A few examples are: Astrobiology, evolutionary biology, molecular biology, conservation biology, developmental psychology, information theory, artificial intelligence and various branches of neuroscience. It may not be an exaggeration to say that the natural sciences are in the midst of a major transition.

Not unlike the revolution that occurred in the physical sciences at the beginning of the twentieth century, that lead physics to a completely new vision of the world of fundamental matter, this new biological view of what life is and how it works may similarly transform our perception of the living world.

At the same time, inquiries into complex systems on the macro scale are revising the scientific view of ecological relationships within the natural world. What we have is an emerging picture of a dynamic interrelated web composed of living and non-living systems, and this view is producing a sea change in perceptions about the human relationship with the natural world. The true implications of science will be to transform how we see ourselves.

Globalization of transportation and communication technologies will shape entirely new cultures

Human cultures are no longer limited by geography. A global transportation infrastructure is facilitating inter-cultural migrations at an unprecedented rate.

Inter-cultural exchange is a daily occurrence in most large cities, but it's not uncommon in smaller towns and remote village. The media are full of images that illustrate the global blending of cultures.

Meanwhile, communications technologies are advancing at an unprecedented rate. According to Moore's Law, the speed of computers doubles every eighteen months. Through rapidly advancing technologies — satellite communications and the Internet — a globally connected human population is becoming a reality via In the coming decades, successive technologies will create seamless real-time streaming information from anywhere to anywhere.

Today there are hundreds of media channels that cater to every interest. As personalized information proliferates we may increasingly find the population simultaneously divided into small specialized segments and unified into large connected communities.

Here's the question—as the population grows, as our local cultures become more diverse, and our global cultures more alike, can the personalization of museums be far behind?

Before examining that let's look at another issue — public science literacy.

Dumb and Dumber

People today are relatively less knowledgeable about the sciences than they were a generation ago.

In survey after survey, the level of science knowledge and general awareness of scientific

information is in decline. At a time when many of our everyday decisions require a working knowledge of the physical and biological sciences, people harbor gross misconceptions, and what's worse; those misconceptions are often reinforced in the popular media, where most people get their information. And the future looks bleak — scientific literacy among school children, especially in California has plummeted.

In 1991 the American Association of Museums published a report entitled *Excellence and Equity,* in which they present an expanded definition of museums' educational role. This report, and I quote:

"…speaks to a new definition of museums as institutions of public service and education, a term that includes exploration, study, observation, critical thinking, contemplation, and dialogue."

A dozen years after that study, we have to ask ourselves why so much of the U.S. population is scientifically illiterate when people have access to more science and natural history museums, aquariums and planetariums than ever before? Does this lack of literacy imply complacency about the issues confronting the natural world and the future of human societies?

It seems there is a dichotomy here. On the one hand there exists a backlash against science, mostly from religious fundamentalists, while on the other, there is a kind of blind faith that science and technology will be able to solve all our problems in some imagined future.

Museums, to truly be relevant have a responsibility to counteract these misconceptions and to provide a forum for dialogue on the major issues of our day — dialogue that allows for a diversity of viewpoints.

Edu-Tainment and other Daydreams: Why they do (and don't) come

At a time when the dissemination of scientific information is most needed, museums are in danger of becoming irrelevant.

The public today is underserved by the kinds of exhibits typically found in museums. While people do go to museums, for a variety of reasons, there is evidence that museum experiences are not fulfilling their potential. People who study market trends are beginning to see some major shifts in public values — a large segment of the population is becoming less materialistic and more mindful of life's other qualities. Education, the environment, peaceful resolution of global conflicts, and social justice are all issues that are high on the list of people's concerns. Consumers are demonstrating a marked interest in paying for unique experiences.

On the surface this should be good news for museums — so why are so many science museums suffering? Maybe it's because they aren't competing with a product the public wants.

The competition for people's leisure time is more intense than ever and that trend will continue.

Competition is impacting almost every leisure industry. Attendance is down at theme parks, movie theaters and museums. Sales are off for many retailers. Even major sports franchises are seeing a decline in ticket sales and television revenues. Whether people have more or less leisure time today is irrelevant — the market for leisure activities is saturated and the financial stakes are high for those in the various industries competing for our time, attention and dollars.

Museums are behind the curve in providing and marketing attractive experiences for potential audiences.

Some years back journalists coined the term "edutainment" to describe attractions that

wrapped educational content in an entertaining presentation. It was applied to museums and also to big brand retailers who leveraged their intellectual property to sell products. There was a frenzy of investment in flagship stores and museum exhibits that attempted to grab visitor attention by capitalizing on popular culture. Various museums have mounted exhibits on topics ranging from Jackie O's gowns to the history of motorcycles. The Field Museum currently has a traveling exhibit on Chocolate. Aquariums have exhibits that resemble zoos and planetariums have resorted to Star Wars-like shows to attract dwindling audiences.

It sometimes seems that museums are self-conscious about the topics and implications of science. Advocacy is a dirty word in the museum world. But by not serving as advocates on issues of importance, museums inadvertently perpetuate the ignorance they are trying to erase. Science museums have not been very successful in promoting the sense of wonder and discovery about our world that propels scientists and science itself. They have not excelled in the medium of story telling. They have not connected science with the human stories that resonate with ordinary people. The interaction of culture and nature can be told from almost every conceivable perspective. The discoveries at the edge of science, the incredible origins and evolution of life, the global spread of human cultures and potential collapse of natural ecosystems — these are all high drama! This is relevant content, but with few exceptions, museums haven't addressed these stories with the kind of creative energy and compelling presentation the public wants. They've been content instead to present the world in boring textbook monologue or as dumbed-down entertainment.

What are the alternatives to death by irrelevance?

The Evolution of Content

We are living in an age where content is king and intellectual property is the kingdom.

Natural history museums are wealthy — their assets are their intellectual property — the collections, archives and knowledge they contain. Intellectual property is like the equity in your house; it can be leveraged to improve your circumstances.

Today there are museums about nearly every topic from UFO's to Elvis to trailer park memorabilia. Museum spaces have been allocated to the work of fashion designers, car makers, agribusiness corporations, glass makers, sporting goods companies, radio and television. There are museums in airports, office buildings and national parks.

The trend in museums, not surprisingly, echoes commercial trends — catering to and nurturing niche markets. The fragmenting of the marketplace into ever more specific niches with information available to every interest will probably continue as long as it is profitable. Today's technologies have enabled a consumer-driver marketplace where personalization and customization are becoming the norm. This has spawned a new generation of self-expression among consumers who now expect and demand personalized information, products and experiences. The resulting demand for content is enormous.

Unfortunately, many museums are not prepared to deliver on those kinds of demands and expectations. They are not organized the way their commercial competition is. They don't have the tools for rapid response, and frankly don't attract the kind of non-scientific talent to create compelling material. Non-research museums don't actually own assets and must rely on others for raw content. There is a shake-out coming and it remains to be seen where the leaders will emerge.

Here's a prediction: Exhibits, as we know them today
will be obsolete in ten to twenty years.

In a few decades, even a museum being built today will have changed to the point of being

largely unrecognizable. The building will be there but the content will be very different from anything we find today. This may be a disturbing thought to many scientists as their imagination conjures up science theme parks and multi-media motion-simulation immersion theaters — the Disneyfication of science. But the kind of change coming in content will be in both style and substance.

Museum content will reflect the integration of the sciences as holistic comprehensive stories designed not for the transfer of knowledge but as a tool for understanding. New research into learning processes and learning styles are already having an impact on how some forward looking institutions develop programs.

In the coming years new communications tools will change the way information is conveyed and received. Data networks will reshape the way the smart museum will detect and respond to visitors' interests, assisting them to assemble information in self-directed story making. The visitor experience will be dialogical rather than didactic. The use of symbolism and suggestion will reinforce objects, facts and data. Rather than attempting to communicate or "push" messages the new museum will facilitate inquiry and exploration, allowing the visitor to "pull" meaning out of the objects and information. This will put more control over the experience in the hands and minds of museum visitors.

Museums will strive to identify and connect with universal human values: compassion, responsibility and community. Content emphasizing respect for living things and concern for healthy natural systems will overlay the more traditional information offering. Activities will facilitate social interaction and provide a forum for meaningful exchange of ideas. Program materials will engage visitors emotionally as well as physically and intellectually.

Museum content will be available through multiple channels, both physical and virtual.

As the Internet and its successors create new and highly sophisticated virtual domains, museum buildings will assume reduced importance in the exchange of ideas. The same will hold true for schools, banks, libraries and other location-based public services. Many of these facilities will survive, simply because the emotional connection to Place seems ingrained in our consciousness, but the ease of access to content will make them less relevant from a functional point of view. We'll want to know they are there but we won't depend on them.

People will be able to browse content on demand. They will have the ability to cast wide or delve deep. They will have information filtered and delivered based on their own preferences, an outgrowth of something called collaborative filtering that exists today and is employed by a number of on-line providers of product and information services. Think of your web browser homepage on hyper-drive and totally mobile.

But just as E-tailing has not replaced retailing, digital museum content will not replace the desire for contact with the primary assets of museums — the objects available in the grand spaces that house them. People will want to visit their familiar icons and will at the same time expect to find the new and current, the unique and unusual surprises, the Next Big Wow. The public's appetite for great experiences will grow along with its expectations.

By now anyone involved with producing museum programs is seeing big dollar signs floating in front of them — the financial implications of the evolution of content are huge.

Where will the money come from?

Museums are already flirting with sources of funding outside of the traditional realms of private individuals, foundations and government grants. Corporate sponsorships of halls and exhibits

are becoming commonplace. Could this trend lead to corporate influence over content? If we suppose that museums become increasingly reliant on corporate funding and if other funds continue to become scarce, will the only alternative be to essentially sell off the rights to intellectual property to support programs?

While this seems far-fetched right now, look at what is happening today in big media. Consolidation is the name of the game. The FCC is entertaining a proposal to allow for more control of the mass media by fewer entities. Will the intellectual property of scientific institutions become another commodity vulnerable to acquisition? What's the alternative? How can museums protect their assets?

The Museum of the Twenty-first Century: A Collaborative Network

Museums as singular institutions could band together in collaborative partnerships to produce and distribute content.

In order to serve the public, maintain their integrity and attract visitors, museums might form networked communities of information/ experience providers, sharing everything from specimens, space and even staff expertise. More importantly they could share the cost of producing and distributing content. They could form content production companies to leverage resources and produce product. They could consolidate power to resist the incursion by others who would seek control of their assets.

Outwardly, to the visitor, there would still be the California Academy of Sciences, the American Museum of Natural History, the Field Museum, the Smithsonian, along with all the smaller regional museums, some with research facilities, some without. The collaborations will occur in the utilization of assets on both the research and public sides as museums eventually get their assets data-based and develop sharing protocols that allow for common use of data, images and even specimens. As specimens become catalogued and digitally stored, the need to conserve them in their physical form may become less critical, enhancing their availability as objects of display. The digitized images and data will become an important part of the array of content available to the public. Museum collaborations will develop new content products and will partner with existing media companies in need of that content. All of this will require new organizational structures that can facilitate broader production and distribution of content while protecting intellectual property rights.

Those institutions that recognize these trends and plan accordingly will position themselves as the leaders for the future.

New enterprise-based organizations will provide needed support for the current endowment structure of exhibit funding. The museums of today that recognize this eventuality and begin to formulate organizational and programmatic plans incorporating an enterprise mind-set, and search out and maximize opportunities that support it, will be the ones who will emerge as leaders in the twenty-first century. Endowments, grants and donations will continue to play a major role in funding museum programs. The additional revenues available through the leveraging and sharing of core assets and intellectual property will help to support quality, marketable products. To effectively compete in the crowded marketplace, museums will need to re-think the nature of their organizations, re-frame their missions and align their resources.

Developments that influence and mold all of our cultural institutions will continue to unfold

— developments that cannot possibly be foreseen today. One of the attributes of success for any institution will be its ability to adapt to changing circumstances — to anticipate major trends and have in place the organizational and creative tools to respond.